

Application No. A.21-07-012

Exhibit No. _____

Date _____

Witness Randell Miller

BEFORE THE
PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

GOLDEN STATE WATER COMPANY

**PUBLIC
REBUTTAL TESTIMONY**

RANDELL MILLER

Prepared by:
GOLDEN STATE WATER COMPANY
630 East Foothill Boulevard
P. O. Box 9016
San Dimas, CA 91773-9016

May 2021

**GOLDEN STATE WATER COMPANY
REBUTTAL TESTIMONY OF**

Randell Miller

TABLE OF CONTENTS

Introduction.....	1
Cybersecurity and IT Capital Expenditures.....	2
Attachment 1 – Data Request AMX-001	26
Attachment 2 – Cal Advocates’ Report on General Office Attachment 5	26
Attachment 3 – GSWC Corrected Attachment 5 of Cal Advocates’ Report on General Office	26
Attachment 4 – Suburban Water Systems Response to Data Request AMX-001	26
Attachment 5 – CWSC’s Data Request Response to Data Request AMX-001	26
Attachment 6 – Data Request REM-01	26
Attachment 7 – CWSC’s Settlement Chapter 13	26
Attachment 8 – CWSC’s Settlement Attachment 4	26
Attachment 9 – Email from SGVWC	26
Attachment 10 – Great Oaks Response to Data Request AMX-001	26
Attachment 11 – GSWC Data Request Response to AMX-010 - Confidential.....	26

1 **GOLDEN STATE WATER COMPANY**

2 **REBUTTAL TESTIMONY OF**

3
4 **Randell Miller**

5
6 (Q) What is your name and relationship to Golden State Water Company (GSWC)?

7 (A) My name is Randell Miller. I am employed by GSWC as Director of the Information
8 Technology (IT) Department. My qualifications are attached at the end of my
9 Prepared Testimony as Attachment A.

10
11 (Q) Have you previously sponsored testimony in this proceeding?

12 (A) Yes. My Prepared Testimony was submitted with GSWC's original application in this
13 proceeding. My Prepared Testimony addressed the IT Capital Budget for 2021, 2022
14 and 2023; related increases in maintenance costs; and the need for a Senior
15 Cybersecurity Analyst and a Senior Service Desk Lead.

16
17 (Q) What issues are you addressing in your rebuttal testimony?

18 (A) I will be addressing Cal Advocates' recommendations to reduce GSWC's General
19 Office (GO) capital budget by: 1) \$2,848,300 for nine cybersecurity projects and, 2)
20 \$5,052,479 for four various IT projects, as outlined in Cal Advocates' Report and
21 Recommendations on General Office, dated February 16, 2021. The \$5,052,479 of
22 various IT projects is also addressed in the Rebuttal Testimony of Patrick Kubiak,
23 beginning on page 13. Chapter 7: General Office Plant Additions states: "The
24 Commission should not authorize GSWC's proposed cybersecurity and IT capital
25 expenditures."¹
26

¹ Report and Recommendations on General Office at 95: 20-21.

RANDELL MILLER REBUTTAL TESTIMONY Cont.

1 (Q) Do you agree with Cal Advocates' recommendations?

2 (A) No. Cal Advocates recommends disallowing necessary cybersecurity and Information
3 Technology (IT) capital projects based upon the unsupported premise that "GSWC's
4 proposed IT and cybersecurity capital expenditures are excessive."² Their position is
5 supported by inaccurate data related to GSWC's historical capital expenditures and
6 understated data of the other Class-A Water utilities historical spend used for
7 comparison (or benchmarking) purposes. Specifically, Cal Advocates' benchmarking
8 analysis is flawed, historical capital spend analysis is flawed, and their
9 recommendation to disallow projects without assessing the merits of each project is
10 flawed.

11
12 (Q) Can you explain in more detail why you state Cal Advocates' benchmarking analysis is
13 flawed, historical capital spend analysis is flawed, and their recommendation to
14 disallow projects without assessing the merits of each is flawed?

15 (A) Yes. Cal Advocates' recommendations are flawed for the following reasons:

- 16 • Cal Advocates' inaccurate definition of cybersecurity and IT project spend
17 which excluded reasonably consistent data from the other Class-A Water
18 utilities, not allowing reliable comparisons to GSWC
- 19 • Cal Advocates' reliance on inaccurate and inconsistent historical cybersecurity
20 and IT capital spend data of GSWC and the other Class-A Water utilities
- 21 • Cal Advocates' lack of understanding of the cybersecurity and IT capital spend
22 of the other Class-A Water utilities due to accounting practices in place
23 between 2014-2019
- 24 • Cal Advocates' lack of comparable data to determine if other Class-A Water
25 utilities are following cybersecurity best practices like GSWC

26

² *Id* at 92: 23.

RANDELL MILLER REBUTTAL TESTIMONY Cont.

- Cal Advocates' improper reliance upon historical spend, as it is not an appropriate indicator of future needs, especially for cybersecurity
- Cal Advocates' inaccurate representation of GSWC's historical expenditures and comparison to future requested IT capital
- Cal Advocates' lack of consideration of GSWC's detailed explanation and support for the necessity of each project, relying solely on inaccurate historical information and not the merits of each project
- Cal Advocates' lack of understanding of the threats cyber-attacks pose to GSWC.

(Q) Can you explain why ensuring data consistency is critical to effective benchmarking?

(A) Yes. When benchmarking, it is important to seek out data with the following characteristics:

- **Accuracy:** In order for a benchmark analysis to provide meaningful insights to a business owner, the data used as benchmarks must be accurate, and the business owner must trust its accuracy. This can be difficult given that every data set has its eccentricities: sources of data, bounds used to determine outliers, sample size, or even classifications.
- **Timeliness:** In some cases, old data cannot be avoided, but business is run in real time, and industries shift financially over the course of a year. Consequently, if a company uses benchmarks from a previous year, the resulting analysis may be ineffective or altogether misleading.
- **Relevancy:** Different industries, geographies, and business sizes have their own trends and circumstances that can affect benchmark data. In order to maximize data effectiveness, business owners, whenever possible, should seek out data that's granularly defined and closely corresponds to the business being analyzed.

RANDELL MILLER REBUTTAL TESTIMONY Cont.

1
2 As an example of data inconsistency creating inaccurate results, Cal Advocates,
3 through a data request submitted to five other Class-A Water utilities,³ instructed the
4 other Class-A Water utilities not to include any expenses relating to cybersecurity or IT
5 capital spend when requesting data related to annual General Office Cybersecurity
6 and IT capital expenditures.⁴ The other Class-A Water utilities that outsourced any of
7 their cybersecurity and IT solutions would have expensed those charges and therefore
8 would not have included similar solutions as GSWC in their reported historical
9 cybersecurity and IT capital spend. GSWC solutions were predominantly implemented
10 in-house and were capital expenditures. Additionally, Cal Advocates did not specify,
11 and more importantly, did not clarify, if the cybersecurity and IT capital spend should
12 include all spend or only that which was closed to plant. Cal Advocates' narrow
13 definition of cybersecurity and IT spend limited to "capital" did not provide reasonable
14 assurance that the historical cybersecurity and IT spend of the other Class-A Water
15 utilities would be correctly reported for comparison purposes with GSWC.⁵ As a
16 result, it is evident that the information submitted by the other Class-A Water utilities in
17 their responses for historical cybersecurity and IT capital spend is not their true spend
18 and that it is not comparable to the historical cybersecurity and IT capital spend
19 provided by GSWC. Not utilizing comparable data when performing a benchmarking
20 analysis will result in inaccurate conclusions, which is the case for Cal Advocates in
21 this instance.

22
23
24
25 ³ California Water Service Company, San Gabriel Valley Water Company, Great Oaks Water Company, San Jose
Water Company and Suburban Water Systems.

26 ⁴ **Attachment 1**, Cal Advocates data request to the other Class-A Water utilities, AMX-001, questions 1.a.ii and
b.iii.

⁵ **Attachment 1**, Cal Advocates data request to the other Class-A Water utilities, AMX-001, questions 1.a and 1.b.

RANDELL MILLER REBUTTAL TESTIMONY Cont.

(Q) Can you explain why the historical cybersecurity and IT capital spend data of GSWC and the other Class-A Water utilities utilized by Cal Advocates in its benchmarking analysis is inaccurate?

(A) Yes. The historical cybersecurity and IT capital spend data presented by Cal Advocates is inaccurate for several reasons. These include:

1. Cal Advocates inappropriately attributed 100% of GSWC's cybersecurity and IT shared services capital spend in its benchmark to the other Class-A Water utilities. GSWC's IT infrastructure supports more than just water ratepayers. GSWC' Shared Corporate Support General Office segment supports two affiliates and as such, each receives an allocation of IT shared services costs. As adopted in GSWC's prior GRC (D.19-05-044) GSWC ratepayers currently only pay for approximately 75% of the cybersecurity and IT shared services costs, not 100% as is reflected in Cal Advocates' comparison. This significantly overstated both the cybersecurity and IT historical capital spend of GSWC in comparison to other Class-A Water utilities, and skewed the comparison analysis negatively toward GSWC.⁶
2. Cal Advocates incorrectly represented the number of customers for Suburban Water Systems as averaging 224,986 between 2014 and 2019 when it actually averaged 76,192. This significantly understated Suburban Water Systems averages (by approximately 300%),⁷ understated the average of all other Class-A Water utilities combined, and skewed the comparison analysis negatively toward GSWC.

⁶ **Attachment 2**, GSWC and other Class-A Water utilities 2014-2019 cybersecurity and IT capital spend taken from the Report and Recommendations on General Office, Attachment 5. Also **Attachment 3**, Corrected GSWC and other Class-A Water utilities 2014-2019 cybersecurity and IT capital spend.

⁷ *Id.*

RANDELL MILLER REBUTTAL TESTIMONY Cont.

- 1 3. Cal Advocates incorrectly represented the average IT capital spend of
2 Suburban Water Systems as \$1.921M when it was reported as \$2.065M.⁸
3 This understated Suburban Water Systems average by 7%, understated the
4 average of all other Class-A Water utilities combined, and skewed the
5 comparison analysis negatively toward GSWC.⁹
6 4. Cal Advocates had calculation errors for IT capital per number of customers for
7 both Suburban Water Systems and Great Oaks Water Company.¹⁰ Cal
8 Advocates reported Great Oaks Water Company's IT capital per number of
9 customers as \$0.003 when it was actually \$2.022 (or 67,398% higher). Due to
10 the calculation error and the overstated customer count mentioned in #2 above,
11 Cal Advocates reported Suburban Water Systems' IT capital per number of
12 customers as \$0.006 when it was actually \$27.102 (or 451,705% higher).¹¹
13 These calculation errors caused these two Class-A Water utilities numbers to
14 be significantly understated, understating the industry averages, and skewed
15 the comparison analysis negatively toward GSWC.

16
17 (Q) Were there other concerns with the historical cybersecurity capital spend data
18 presented by Cal Advocates of GSWC and the other Class-A Water utilities?

19 (A) Yes. Even with the aforementioned errors being corrected, there are additional
20 concerns with the historical cybersecurity capital spend data reported by the other
21 Class-A Water utilities. Further analysis of the historical cybersecurity capital spend
22 data and further explanation of the responses provided by the other Class-A Water
23
24

25 ⁸ **Attachment 2, Attachment 3 and Attachment 4**; Suburban Water Systems response to data request AMX-001
from Cal Advocates

26 ⁹ **Attachment 3**

¹⁰ **Attachment 2 and Attachment 3**

¹¹ **Attachment 3**

RANDELL MILLER REBUTTAL TESTIMONY Cont.

1 utilities indicates under reporting of capital spend may have occurred, raising serious
2 doubt as to the viability of using their data for benchmarking purposes.

3
4 The first red flag is found in California Water Service Company's (CWSC's) response
5 to the data request. CWSC's response included the following statement, "**CWS**
6 **Response Note 1: All amounts provided above represent the amounts**
7 **associated with capital projects that have been closed to plant.**"¹² Cal Advocates
8 did not instruct the other Class-A Water utilities or GSWC to capture capital spend this
9 way. GSWC reported **all** capital spend for 2014-2019 regardless of whether a project
10 had been closed to plant or not (i.e. in construction work in progress). Even though
11 CWSC informed Cal Advocates of this, Cal Advocates did not question the
12 inconsistent data reporting and should have requested *actual* capital spend for
13 consistency (accuracy) in benchmarking. CSWC's decision to only report closed to
14 plant capital spend likely understated their actual cybersecurity and IT capital spend,
15 rendering their historical spend understated for benchmarking purposes.

16
17 The second red flag is the cybersecurity capital spend data provided by CWSC for
18 2014-2017. Besides the previously mentioned issue of only reporting closed to plant
19 spend, for the years 2014-2016, they reported \$0 capital spent on cybersecurity and
20 only \$7,356 for 2017.¹³ This should have resulted in follow-up questions and further
21 analysis from Cal Advocates that did not occur.¹⁴ Further analysis of CSWC's
22 extremely low cybersecurity capital spend shows CWSC had ~\$1.2M in cybersecurity
23
24

25 ¹² **Attachment 5**, California Water Service Company response to data request AMX-001 from Cal Advocates,
CWS Response Note 1.

26 ¹³ **Attachment 5**, California Water Service Company response to data request AMX-001 from Cal Advocates,
cells C4-F4, Annual Cybersecurity Related Capital Expenditures, 2014-2017.

¹⁴ **Attachment 6**, Public Advocates Office Data Response A.20-07-012, dated February 23, 2021, Response 1c.

RANDELL MILLER REBUTTAL TESTIMONY Cont.

capital approved by the Commission from 2014-2017.¹⁵ This is a significant gap in Commission approved versus CWSC reported cybersecurity capital spend (less than 1% spent across 4 years). Even more concerning was a 2017 Commission approved CWSC cybersecurity project for "... the corporate network **and** the Supervisory Control and Data Acquisition (SCADA) network."¹⁶ This joint cybersecurity and SCADA security project (and possibly others) may have been recorded 100% as SCADA security and not reflected properly in CWSC's cybersecurity reporting, since CWSC reported \$1.45M in annual average SCADA security capital spend between 2014-2019.¹⁷ This would explain the low cybersecurity spend reported by CSWC as compared to GSWC and the other Class-A Water utilities, especially given their size.

The third red flag is the cybersecurity capital spend data provided by San Gabriel Valley Water Company (SGVWC) for 2014-2017. For the years 2014-2017, they reported \$0 capital spent on cybersecurity.¹⁸ Similarly, Cal Advocates did not follow-up with SGVWC on this atypical cybersecurity capital spend compared to other Class-A Water utilities. GSWC reached out to SGVWC regarding their 2014-2019 reported cybersecurity capital spend. SGVWC stated via email that during the historical period of 2014-2019, they had minimal capitalized spend in the General Division on cybersecurity as almost all of their cybersecurity requirements were outsourced during this timeframe, and those cybersecurity costs were expensed.¹⁹ As a result, SGVWC's true "spend" on cybersecurity for 2014-2019 is unknown and clearly understated in

¹⁵ **Attachments 7 and 8**, CWSC's settlement, Decision 16-12-042, page 156 and page 9 of Attachment 4, PID# 99477 – Procure Intrusion Prevention System (\$344,605), PID# 63314 – I.T. Security (\$313,114), and PID# 63411 – Enterprise Identity Management Phase 1 (\$518,554).

¹⁶ **Attachment 7**, CWSC's settlement, Decision 16-12-042, page 156, PID# 99477 – Procure Intrusion Prevention System (\$344,605).

¹⁷ **Attachment 5**, California Water Service Company response to data request AMX-001 from Cal Advocates, average of cells C6-H6, SCADA Capitalized Expenditure (If centralized in GO), 2014-2019

¹⁸ **Attachment 2**, SGVWC's 2014-2019 cybersecurity capital spend, taken from the Report and Recommendations on General Office, Attachment 5.

¹⁹ **Attachment 9**, Email from Shawn Cosgrove, IT Manager at San Gabriel Valley Water Company

RANDELL MILLER REBUTTAL TESTIMONY Cont.

1 their data request response as, once again, Cal Advocates instructed the utilities to
2 exclude expenses in their total spend. For this reason, SGVWC's historical
3 cybersecurity capital spend should be removed from the comparison.

4
5 The fourth red flag is a statement made by Great Oaks Water Company in response to
6 their data request. They stated, "Modifications are constantly made with cybersecurity
7 in mind, however our software is currently internal only and not hardened as an
8 outward facing system would be".²⁰ Great Oaks statement indicates a completely
9 different infrastructure than the rest of the other Class-A Water utilities, likely due to
10 their small size. Not having Internet accessible systems for customers and employees
11 significantly reduces the cybersecurity, infrastructure and applications capital spend
12 required. For these reasons, Great Oaks historical Cybersecurity and IT capital spend
13 should be removed from the comparison to GSWC.

14
15 (Q) Is it reasonable to expect Cal Advocates would have followed up with the other Class-
16 A Water utilities when the responses to the data request contained caveats and
17 produced such a wide range of results?

18 (A) Yes. For example, the following are reasonable questions Cal Advocates should have
19 asked CWSC and SGVWC about the data provided in their responses due to the
20 documented caveats and readily evident data anomalies:

- 21
22 1. For CWSC, what was your cybersecurity and IT capital spend for 2014-2019
23 regardless of being closed to plant or not?
24 2. For CWSC and SGVWC, what criteria did you use to determine whether to classify
25 a capital project as cybersecurity related when you completed the data request?

26
²⁰ **Attachment 10**, Great Oaks response to Cal Advocates data request AMX-001, Amount Cybersecurity Related, cell K13, emphasis added.

RANDELL MILLER REBUTTAL TESTIMONY Cont.

3. For CWSC, why is there such a large gap in Commission approved cybersecurity capital²¹ versus actual spend in 2014-2017?

4. For CWSC and SGVWC, were any cybersecurity or IT services outsourced, utilizing SaaS, or cloud software and therefore expensed from 2014-2019?

Cal Advocates confirmed they did not ask any questions about the data received from the other Class-A Water utilities in the historical cybersecurity and IT capital spend data request they issued.²²

(Q) Can you further explain what you mean by the uncertainty of actual historical cybersecurity and IT capital spend of the other Class-A Water utilities due to accounting practices in place between 2014-2019?

(A) Yes. GAAP accounting practices in place during the historical timeframe in Cal Advocates data request may have resulted in understated cybersecurity and IT spend of the other Class-A Water utilities.

As previously noted, cybersecurity and IT spend can be hosted on-premise or outsourced or hosted in the cloud. While solutions hosted on premise can be capitalized, outsourced and cloud solutions have not been capitalized due to GAAP accounting practices. In August 2018, the FASB issued ASU 2018-15-Intangibles-Goodwill and Other-Internal-Use Software (Subtopic 350-40): *Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract*. Under this ASU, entities that enter into cloud computing service arrangements are required to apply existing internal-use software guidance to

²¹ **Attachments 7 and 8**, CWSC's settlement, Decision 16-12-042, page 156 and page 9 of Attachment 4, PID# 99477 – Procure Intrusion Prevention System (\$344,605), PID# 63314 – I.T. Security (\$313,114), and PID# 63411 – Enterprise Identity Management Phase 1 (\$518,554).

²² **Attachment 6**, Public Advocates Office Data Response A.20-07-012, dated February 23, 2021, Response 1c.

RANDELL MILLER REBUTTAL TESTIMONY Cont.

determine which implementation costs are eligible for capitalization. Under that guidance, implementation costs are capitalized or expensed depending on the nature of the costs and the project stage during which they are incurred. Due to the accounting principles in place prior to Q3 2018, Class-A Water utilities deciding to use cloud services may have been expensing the cost of similar products that GSWC was capitalizing. However, the data request to the other Class-A Water utilities focused only on “capital” cybersecurity spend, and did not ask if they utilized cloud cybersecurity solutions from 2014-2019. This is likely a contributing factor to the low cybersecurity “capital” spend reported by CWSC and a confirmed factor for the low spend reported by SGVWC for 2014-2017. The accounting practices in place for cloud computing prior to the FASB guidance, and the uncertainty of the timing of accounting changes by the other Class-A Water utilities, renders any comparisons to GSWC as likely understated.

(Q) Did Cal Advocates attempt to benchmark the cybersecurity practices of GSWC with those of the other Class-A Water utilities to ascertain why there were historical cybersecurity capital spend differences?

(A) No. When Cal Advocates sent out their data request to other Class-A Water utilities, they did not ask those utilities to provide an assessment of the maturity of their cybersecurity programs, nor did they ask these utilities to identify if they were developing their cybersecurity program following an industry-accepted framework, which is a best practice. As a result, there is a lack of comparable data to determine if other Class-A Water utilities are following cybersecurity best practices like GSWC. Comparisons (benchmarks) should be against companies that have deployed best practices²³ such as a standard of performance (e.g. NIST cybersecurity framework).

²³ <https://hbswk.hbs.edu/item/when-benchmarks-dont-work>

RANDELL MILLER REBUTTAL TESTIMONY Cont.

Only one (Suburban Water Systems) of the five other Class-A Water utilities stated they were following a best practices cybersecurity framework like GSWC.²⁴ Using the correct historical cybersecurity capital spend data for Suburban Water Systems and comparing that to GSWC's (impact to Water ratepayers) for 2014-2019, GSWC is shown to have spent only ~34% of what Suburban spent per operating revenues and only ~41% of what Suburban spent per number of customers.²⁵ Refer to Table 1 below.

Table 1 - GSWC vs. Suburban 2014-2019 Cybersecurity Spend

	GSWC ¹	Suburban ²	GSWC vs. Suburban
	Cybersecurity Cap. Exp.	Cybersecurity Cap. Exp.	Cybersecurity Cap. Exp.
Per Operating Revenues	0.064%	0.189%	34.11%
Per Number of Customers	\$0.768	\$1.885	40.76%

¹ Corrected to include historical cybersecurity capital spend for Corporate IT Shared Services (Randell Miller) at 75.43%, which was the impact to GSWC Water ratepayers.

² Corrected to include Suburban's actual customer count.

(Q) Given all the issues with the historical data analysis by Cal Advocates, can the data be relied upon to support their recommendations?

(A) No. The historical data analysis conducted and presented by Cal Advocates is inconsistent, plagued with errors, lacks proper benchmarking protocol, understated for the other Class-A Water utilities, and above all, is not an apples-to-apples comparison. As the benchmarking analysis used by Cal Advocates to support its' recommendations is flawed and unreliable, the Commission should reject Cal Advocates' recommendations.

²⁴ **Attachment 4**, Suburban Water Systems response to Cal Advocates data request AMX-001, Notes, cell B10

²⁵ **Attachment 3**, Corrected GSWC and other Class-A Water utilities 2014-2019 cybersecurity and IT capital spend.

RANDELL MILLER REBUTTAL TESTIMONY Cont.

1
2 (Q) Cal Advocates considered GSWC's historical cybersecurity and IT capital spend as an
3 indicator of its future needs. Is this appropriate?

4 (A) No. Historical spend is not an appropriate indicator of future needs, especially for
5 cybersecurity. The timeliness of information for comparative purposes is essential.²⁶
6 This is especially true in the rapidly evolving cybersecurity world. As with all IT
7 systems, a cybersecurity program is not a one-and-done solution. Cybersecurity
8 solutions require continuous validation and improvement in order to remain effective.
9 Most cybersecurity solutions are undergoing rapid evolution and thus it is necessary to
10 evaluate these solutions for continued effectiveness more frequently than more
11 established IT-related systems. GSWC undertook a similar process to the method
12 presented by FireEye in the Security Effectiveness 2020 report²⁷ in order to determine
13 what projects were necessary to protect customer and corporate data, taking into
14 account new regulations and laws, such as the California Consumer Privacy Act.
15 GSWC's cybersecurity staff assessed each current tool to determine if it could meet
16 the needs of the company based on available cyber threat intelligence and risk
17 analysis. New projects were selected only when a current product could not provide
18 coverage in an area deemed critical to protecting the information of GSWC's
19 customers. The 16 total cybersecurity projects (11 existing and 5 net-new) are the
20 culmination of GSWC's efforts.

21
22 (Q) Cal Advocates states that GSWC's proposed IT capital expenditures are excessive in
23 terms of its own historical spend. Is this statement accurate?
24

25
26 ²⁶ <https://www.accountingweb.com/aa/auditing/benchmarking-for-competitive-advantage-best-practices-metrics-pitfalls>

²⁷ <https://content.fireeye.com/security-effectiveness/rpt-security-effectiveness-2020-deep-dive-into-cyber-reality> -
p. 16

RANDELL MILLER REBUTTAL TESTIMONY Cont.

- (A) No. Cal Advocates inaccurately represented GSWC's historical IT capital when compared to future requested IT capital. Part of the inaccuracy stems from inconsistent representation of GSWC's IT capital by Cal Advocates throughout its report. For example:
- Footnote 151, Cal Advocates states IT related capital **includes** the projects of Patrick Kubiak (Field Technology), Randell Miller (Corporate IT), and Jon Pierotti (providing testimony for the Customer Service Center) for a total amount of \$13,157,196 (annual average of \$4,385,732).²⁸
 - Table 7-2, Cal Advocates **excludes** the capital projects of Patrick Kubiak and Jon Pierotti when providing historical IT spend, but the analysis that follows incorrectly **includes** their projects for future IT related capital projects for the comparison (\$4,385,732 is compared to \$2,799,856).²⁹
 - Table 7-3, Cal Advocates **includes** the capital projects of Randell Miller and Patrick Kubiak but **excludes** those of Jon Pierotti when providing historical IT spend.³⁰
 - Table 7-4, Cal Advocates **includes** the capital projects of Randell Miller and Patrick Kubiak but **excludes** those of Jon Pierotti when providing historical IT spend.³¹
 - Table 7-5, Cal Advocates **excludes** the capital projects of Patrick Kubiak and Jon Pierotti when providing historical IT spend but then **includes** their projects for future IT related capital projects.³²

²⁸ Report and Recommendations on General Office at 92, footnote 151.

²⁹ *Id* at 93: 7-20.

³⁰ *Id* at 94: 10-11.

³¹ *Id* at 95: 3-12.

³² *Id* at 95: 16-19.

RANDELL MILLER REBUTTAL TESTIMONY Cont.

Since the data requests to GSWC for historical cybersecurity and IT spend referenced only the Prepared Testimony of Randell Miller and Patrick Kubiak, GSWC did not believe Customer Service Center related capital history was considered IT and being requested. As such, the historical spend for the Customer Service Center was not provided to Cal Advocates. As a result, the Customer Service Center data is excluded in all of Cal Advocates' historical comparisons. However, Cal Advocates includes the proposed IT related capital spend of the Customer Service Center (Jon Pierotti's Prepared Testimony) in their comparison.

(Q) When the inconsistent representation by Cal Advocates of GSWC's historical IT capital is corrected, is GSWC's future requested IT capital 56.64% higher as stated by Cal Advocates?

(A) No. Cal Advocates inaccurately states GSWC's proposed annual average spend for IT capital is 56.64% higher than its historical annual average spend.³³ When the GSWC historic annual average IT capital in Cal Advocates' report³⁴ is corrected to match Cal Advocates' definition of IT related capital spend for GSWC in Footnote 151,³⁵ GSWC's proposed annual average spend for IT capital is only 26.24% higher than its historical spend, not 56.64% as stated by Cal Advocates (refer to Table 2 below).

Table 2

	2021	2022	2023	GSWC Proposed Annual Average	GSWC Historic Annual Average 1
IT Capital Expenditure	\$7,217,286	\$2,730,850	\$3,209,060	\$4,385,732	\$3,474,183

¹ Corrected to include historical IT capital spend for Field Tech IT (Patrick Kubiak) and the Customer Service Center (Jon Pierotti). No adjustments were made for shared services or "U" cost center for ease of comparison to total requested amounts.

³³ *Id* at 93: 17-19.

³⁴ *Id* at 95: 16-19.

³⁵ *Id* at 92, Footnote 151.

RANDELL MILLER REBUTTAL TESTIMONY Cont.

(Q) Cal Advocates' states that GSWC's proposed IT Capital Expenditures are Excessive in terms of the historic expenditures of the other Class-A Water utilities.³⁶ Is this an accurate statement?

(A) No. GSWC's proposed annual average spend for IT capital is significantly *less* than the historic expenditures of the other Class-A Water utilities. GSWC corrected all the *known* issues with the other Class-A Water utilities data. However, with absolute certainty, the other Class-A Water utilities historical averages are still understated (e.g. CWSC only reporting closed to plant IT capital) as compared to GSWC. The degree to which the other Class-A Water utilities historical data is understated is unknown. Even with the uncertainty of the understated amounts of the other Class-A Water utilities, GSWC's historical average IT capital is approximately 43% lower than the other Class-A Water utilities historical average (excluding Great Oaks), using Cal Advocates' metrics (refer to Table 3 below).

Table 3 (Excluding Great Oaks)^{1,2}

	GSWC Historical IT Cap. Exp.	Other Class-A Water utilities Historical IT Cap. Exp.	GSWC vs. Other Class-A Water Utilities Historical IT Cap. Exp.
Per Operating Revenues	0.897%	1.556%	57.63%
Per Number of Customers	\$10.691	\$18.638	57.36%

¹ Corrected the wrong data and calculation errors for the other Class-A Water utilities in Attachment 5 of the Public Advocates Office Report and Recommendations on General Office, dated February 16, 2021.

² Corrected to include historical IT capital spend for Field Tech IT (Patrick Kubiak) and CSC (Jon Pierotti) at 100% (except for the 2019 MWM project which was a cost center center "U" project (at 89.58%) and the historical IT capital spend of Corporate IT Shared Services (Randell Miller) at 75.43%, which was the impact to GSWC Water ratepayers.

³⁶ *Id* at 92: 20-23.

RANDELL MILLER REBUTTAL TESTIMONY Cont.

Although GSWC's proposed IT capital is 26.24% higher than its own historical average, it is still approximately 28% less than the historical average of the other Class-A Water utilities excluding Great Oaks (see Table 4 below).

Table 4 - Proposed GSWC IT Capital vs. to Other Class-A Water utilities (Excluding Great Oaks)¹

	GSWC Proposed IT Cap. Exp.²	Other Class-A Water utilities Historical IT Cap. Exp.³	GSWC vs. Other Class-A Water Utilities IT Cap. Exp.
Per Operating Revenues	1.128%	1.556%	72.46%
Per Number of Customers	\$13.441	\$18.638	72.12%

¹ Great Oaks is excluded due to lack of comparable infrastructure to other Class-A Water utilities and Public Advocates Office Report and Recommendations on General Office, dated February 16, 2021.

² Corrected the wrong data and calculation errors for the other Class-A Water utilities in Attachment 5 of the Public Advocates Office Report and Recommendations on General Office, dated February 16, 2021.

³ Corrected to include "U" projects at 89.58% and Corporate IT support "Shared Services" at 75.43% which is the impact to GSWC Water ratepayers and appropriate for comparison with the other Class-A Water utilities.

The historical spend period of the other Class-A Water utilities dates back as far as 2014 to a time when cybersecurity was not at the same risk level as GSWC faces through 2023 (a 10 year span). Even with this consideration, when GSWC's proposed cybersecurity and IT capital spend are combined and compared to the corrected historical combined spend of the other Class-A Water utilities, GSWC is still requesting approximately 16% less in the future than these others spent historically.

RANDELL MILLER REBUTTAL TESTIMONY Cont.

**Table 5 - Proposed GSWC Cybersecurity and IT Capital vs. to Other Class-A Water utilities
(Excluding Great Oaks and San Gabriel Valley Water Company's Cybersecurity) ¹**

	GSWC Proposed Cybersecurity and IT Capital Combined²	Other Class-A Water utilities Historical Cybersecurity and IT Capital Combined³	GSWC vs. Other Class-A Water Utilities Cybersecurity Capital Exp.
Per Operating Revenues	1.400%	1.669%	83.93%
Per Number of Customers	\$16.694	\$19.978	83.56%

¹ Great Oaks is excluded due to lack of comparable infrastructure to other Class-A Water utilities and

San Gabriel Valley Water Company is excluded due to their outsourcing of cybersecurity which resulted in an understatement of their true cybersecurity "spend" and rendering their data incomparable to GSWC's.

² Corrected to include "U" projects at 89.58% and Corporate IT support "Shared Services" at 75.43% which is the impact to GSWC Water ratepayers and appropriate for comparison with the other Class-A Water utilities.

³ Corrected the wrong data and calculation errors for the other Class-A Water utilities in Attachment 5 of the Public Advocates Office Report and Recommendations on General Office, dated February 16, 2021.

Therefore, the Commission should reject Cal Advocates' notion that GSWC's proposed IT capital expenditures are excessive in terms of the historic expenditures of the other Class-A Water utilities.

(Q) Cal Advocates states that GSWC presented no valid or urgent reason to increase its cybersecurity and IT expenditures.³⁷ Is this accurate?

(A) No. GSWC presented compelling testimony for each cybersecurity and IT capital project in our rate case filing. Fifty-five (55) total pages of detailed project justification were included in the Prepared Testimony from, and data requests to, Randell Miller and Patrick Kubiak for the IT capital projects. Eleven and a half (11.5) total pages of detailed project justification were included in the Prepared Testimony from, and data requests, to Randell Miller for the cybersecurity capital projects.^{38,39,40,41} GSWC explained the types of existing cyber threats our current solutions do not protect

³⁷ *Id* at 97: 1-2.

³⁸ **Attachment 11**, Data Request AMX-010 (A.20-07-012), CONFIDENTIAL Response 1.c.

³⁹ **Attachment 11**, Data Request AMX-010 (A.20-07-012), Response 1.c.

⁴⁰ Prepared Testimony of Randell Miller

⁴¹ Prepared Testimony of Patrick Kubiak

RANDELL MILLER REBUTTAL TESTIMONY Cont.

1 against that would be addressed with the 5 proposed new tools. Cal Advocates
2 ignored the business justification of each project and never provided evidence that any
3 project will not benefit (protect) water ratepayers, yet requests the Commission to
4 disallow many future projects based on inaccurate and inappropriate historical data.
5

6 (Q) Does Cal Advocates comprehend the risks cyber-attacks pose to GSWC?

7 (A) No. Cal Advocates incorrectly concludes GSWC is not facing any eminent and urgent
8 cybersecurity threats⁴² since GSWC has not experienced a breach of our network
9 where information of any sort was stolen. However, our response of not being
10 breached also included the statement "... *to the best of our knowledge*."⁴³ To support
11 this caveat, GSWC shared with Cal Advocates in the same data request *The Security*
12 *Effectiveness Report 2020* by FireEye, one of the leading cybersecurity companies in
13 the world, that showed in real world testing an average of 65% of attacks go
14 unprevented or undetected in corporate environments. Common causes listed for
15 these high numbers include outdated classification categories, limited network
16 monitoring, and poor tracking and communication of changes to systems to allow
17 exceptions to security rules.⁴⁴
18

19 Ginni Rometty, IBM's chairman, president and CEO stated, "Cybersecurity is the
20 single greatest threat to every company in the world".⁴⁵ The Cyberspace Solarium
21 Commission concluded in March 2020 that "water utilities remain largely ill-prepared to
22

23 ⁴² Report and Recommendations on General Office at 97: 5.

24 ⁴³ **Attachment 11**, Data Request AMX-010 (A.20-07-012), Response 1.a.

25 ⁴⁴ <https://content.fireeye.com/security-effectiveness/rpt-security-effectiveness-2020-deep-dive-into-cyber-reality> -
p. 11

26 ⁴⁵ <https://kirbyidau.com/2020/03/02/quote-ginni-rometty-cyber-crime-is-the-greatest-threat-to-every-company-in-the-world/#:~:text=Quote%3A%20Ginni%20Rometty%20%E2%80%9CCyber%20crime,every%20company%20in%20the%20world%E2%80%9D>

RANDELL MILLER REBUTTAL TESTIMONY Cont.

1 defend their networks from cyber-enabled disruption.”⁴⁶ In fact, the former chief
2 technology officer for the state of New Jersey called water and wastewater “probably
3 the least mature sector [of 16] from a cybersecurity standpoint.”⁴⁷

4
5 Cal Advocates recommended that 9 of the 16 cybersecurity projects be disallowed.
6 GSWC is requesting only five (5) net new projects in this GRC. Three of the five new
7 cybersecurity capital projects being requested by GSWC are necessary technologies
8 to collect and analyze information from across the entire corporate network to identify,
9 alert, and respond to suspicious activities. Eleven (11) of the 16 were put in place in
10 prior rate case years and are included in this filing as license renewals as we continue
11 to need these solutions. In my Prepared Testimony, I mention the 11 existing
12 cybersecurity projects stating, “Some of the tools shown are existing solutions that
13 continue to work well and others need modification or expansion to realize their
14 protective potential.”⁴⁸ Several of these projects have been in place for years without
15 significant upgrades and the underlying technologies have changed or expanded to
16 address risk scenarios that did not exist during their initial implementation. As an
17 example of this, while GSWC was preparing for the 2017 GRC, standard components
18 of enterprise-level Endpoint Protection platforms replaced anti-virus programs as the
19 primary means of protecting computing assets from malicious software. GSWC
20 replaced its legacy anti-virus software with modern Endpoint Protection in 2018 after
21 the incumbent vendor discontinued their traditional anti-virus product (which is what
22 GSWC used as the basis for the anti-virus renewal project in the previous GRC).
23 While significantly more effective than anti-virus programs were, Endpoint Protection
24 platforms are also more expensive.

25 ⁴⁶ <https://www.solarium.gov/>, p. 62

26 ⁴⁷ <https://thehill.com/opinion/cybersecurity/540009-cybersecurity-and-your-water-hacker-attempted-to-poison-florida-citys?rl=1>

⁴⁸ Prepared Testimony of Randell Miller at 10: 16-18.

RANDELL MILLER REBUTTAL TESTIMONY Cont.

1
2 Cal Advocates' recommendation to disallow 9 cybersecurity projects would result in
3 the elimination of 5 critical cybersecurity solutions already in place. This would
4 significantly increase the cyber threat to our company, reducing the protective
5 measures in place for our customer and corporate data. Additionally, GSWC has been
6 able to secure cybersecurity insurance at a reasonable premium based on our current
7 cybersecurity posture. This insurance includes various services of experts for matters
8 such as forensics that will assist a breached company in restoring services more
9 quickly and minimizing the impact to ratepayers. Removing 5 existing cybersecurity
10 solutions would likely result in a higher premium and possibly our inability to obtain
11 cybersecurity insurance.

12
13 In contrast to GSWC's desired state of 16 cybersecurity projects (tools) after approval
14 of the 5 net-new requested, other organizations typically have more cybersecurity
15 tools. Reporting on information gathered from real attack activity in the production
16 environments of companies in 11 industry verticals, including the critical infrastructure
17 sector and Fortune 500 companies, FireEye found that on average, organizations
18 have between 30 and 50 tools dedicated to detecting and preventing cyberattacks and
19 data breaches.⁴⁹ Cal Advocates did not request any information from the other Class-
20 A Water utilities regarding the number of existing cybersecurity tools, anticipated
21 future cybersecurity capital needs or the maturity of their cybersecurity programs.

22
23 Well-publicized cybersecurity incidents have demonstrated the existence of valid and
24 urgent needs to address shortcomings in the training, detection, and protection
25

26
⁴⁹ <https://content.fireeye.com/security-effectiveness/rpt-security-effectiveness-2020-deep-dive-into-cyber-reality> -
p. 7

RANDELL MILLER REBUTTAL TESTIMONY Cont.

1 capabilities. In the aftermath of many publicized data breaches, top cybersecurity
2 experts give the same advice:

- 3 A. Ensure you follow industry best practices like locking accounts after several
4 incorrect login attempts
- 5 B. Collect, monitor, analyze, and generate alerts for anomalous behavior
6 everywhere in your network
- 7 C. Look to documents like the NIST Cybersecurity Framework⁵⁰ or the Center
8 for Internet Security “Critical Security Controls”⁵¹ to guide your cyber
9 defense efforts.

10
11 Detecting breaches sooner can result in less loss of data, reduce services downtime
12 to our customers, and result in lower overall costs of a breach. The 2020 Cost of a
13 Data Breach Report published by IBM Security⁵² using research from the Ponemon
14 Institute provided statistics from 524 breached organizations. The report showed that
15 on average it took 207 days to detect that a breach had occurred and another 73 days
16 to fully resolve the situation and restore services for a total breach lifecycle of 280
17 days at an average cost of \$6.03 million dollars. Companies with fully deployed
18 security automation systems took significantly less time to detect (175 days) and
19 resolve (59 days) than those without, and on average saved \$3.5 million dollars in
20 overall cost per breach related to breach response.

21
22 GSWC is proactively addressing this major threat with a prudent buildout of our
23 cybersecurity program in this rate case filing. Cybersecurity is all about staying ahead
24 of threats rather than managing them after the fact.

25
26 ⁵⁰ <https://www.nist.gov/cyberframework>

⁵¹ <https://www.cisecurity.org/controls/>

⁵² <https://www.ibm.com/security/digital-assets/cost-data-breach-report/#/> - p. 48-56 Requires registration

RANDELL MILLER REBUTTAL TESTIMONY Cont.

(Q) Should the Commission's decision rely on Cal Advocates' analysis provided in their report?

(A) No. The Commission's decision should not be influenced by:

- Cal Advocates' inaccurate definition of cybersecurity and IT project spend which excluded reasonably consistent data from the other Class-A Water utilities, not allowing reliable comparisons to GSWC
- Cal Advocates' reliance on inaccurate and inconsistent historical cybersecurity and IT capital spend data of GSWC and the other Class-A Water utilities
- Cal Advocates' lack of understanding of the cybersecurity and IT capital spend of the other Class-A utilities due to accounting practices in place between 2014-2019
- Cal Advocates' lack of comparable data to determine if other Class-A Water utilities are following cybersecurity best practices like GSWC
- Cal Advocates' improper reliance upon historical spend, as it is not an appropriate indicator of future needs, especially for cybersecurity
- Cal Advocates' inaccurate representation of GSWC's historical expenditures and comparison to future requested IT capital
- Cal Advocates' lack of consideration of GSWC's detailed explanation and support for the necessity of each project, relying solely on inaccurate historical information and not the merits of each project
- Cal Advocates' lack of understanding of the threats cyber-attacks pose to GSWC.

RANDELL MILLER REBUTTAL TESTIMONY Cont.

Table 6 below summarizes the inaccurate data, inconsistent method in which the data was presented, and the ultimate lack of reliability of the data in Cal Advocates' reporting of GSWC's and the other Class-A Water utilities historical cybersecurity and IT capital spending.

Table 6

<i>As Reported by Cal Advocates</i>	<i>Accurate</i>	<i>Consistent</i>	<i>Reliable</i>
Historical IT Capital Spend of other Class-A Water Utilities	No	No	No
Historical IT Capital Spend of GSWC	No	No	No
Comparison of GSWC IT Capital Spend to other Class-A Water Utilities	No	No	No
Comparison of GSWC Proposed IT Capital Spend to It's own Historical Spend	No	No	No
Historical Cybersecurity Spend of other Class-A Water Utilities	Suspect	Suspect	No
Historical Cybersecurity Spend of GSWC	Yes	Yes	Yes
Comparison of GSWC Cybersecurity Spend to other Class-A Water Utilities	Suspect	Suspect	No
Comparison of GSWC Cybersecurity Frameworks/Best Practices/Total Spend to other Class-A Water Utilities	Did not occur	Did not occur	Did not occur
Comparison of GSWC Proposed Cybersecurity Capital Spend to Its own Historical Spend	Yes	Yes	Yes

(Q) Should the Commission's decision rely on GSWC's prepared Testimony?

(A) Yes. The Commission should approve GSWC's requested cybersecurity and IT capital spend for 2021-2023, due to our:

- Proposed cybersecurity and IT capital spend combined being below the *corrected* historical averages of comparable Class-A Water utilities in Cal Advocates' study
- Demonstrated business needs for GSWC's cybersecurity and IT capital projects
- Demonstrated need for additional cybersecurity capabilities to preemptively address new and emerging cyber threats to protect corporate and customer data
- Structured approach of implementing a well-established cybersecurity framework (NIST) to protect customer and corporate data.

RANDELL MILLER REBUTTAL TESTIMONY Cont.

For the same reasons listed above for cybersecurity and IT capital projects, the Commission should approve the amount recorded in CWIP for the projects listed in Cal Advocates' Table 8-4⁵³ shown below which Cal Advocates recommends for disallowance.

Table 8-4: Summary of Adjustments for the Predicted CWIP

Projects with Predicted CWIP	2019	2020	2021	2022	2023
Application Whitelisting System (AWS)	\$0	\$32,500	\$0	\$0	\$0
Data Warehouse Project	\$144,896	\$540,717	\$134,242	\$137,034	\$139,891
Mobile Workforce Management (MWM) Migration Project	\$352,480	\$229,057	\$93,787	\$94,756	\$95,747
Enterprise Asset Management System (EAMS)	\$19,239	\$199,412	\$1,266,892	\$267,195	\$272,414
Geographical Information Systems (GIS) Project	\$0	\$507,628	\$175,460	\$198,006	\$183,624
Total	\$516,615	\$1,509,314	\$1,670,381	\$696,991	\$691,676

(Q) Does this conclude your Rebuttal Testimony?

(A) Yes, it does.

⁵³ Report and Recommendations on General Office at 112: 1-2.

RANDELL MILLER REBUTTAL TESTIMONY Cont.

Attachment 1 – Data Request AMX-001

Attachment 2 – Cal Advocates’ Report on General Office Attachment 5

Attachment 3 – GSWC Corrected Attachment 5 of Cal Advocates’ Report on General Office

Attachment 4 – Suburban Water Systems Response to Data Request AMX-001

Attachment 5 – CWSC’s Data Request Response to Data Request AMX-001

Attachment 6 – Data Request REM-01

Attachment 7 – CWSC’s Settlement Chapter 13

Attachment 8 – CWSC’s Settlement Attachment 4

Attachment 9 – Email from SGVWC

Attachment 10 – Great Oaks Response to Data Request AMX-001

Attachment 11 – GSWC Data Request Response to AMX-010 - Confidential

REBUTTAL TESTIMONY OF RANDELL MILLER

ATTACHMENT 1 – DATA REQUEST AMX-001



Public Advocates Office
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, California 94102
Tel: 415-703-1584
www.publicadvocates.cpuc.ca.gov

Public Advocates Office DATA REQUEST: AMX-001

Date: October 2, 2020

To: Natalie Wales
Regulatory Attorney
California Water Service Company

Email: nwales@calwater.com

From: Victor Chan
Public Advocates Office
Program & Project Supervisor

Phone: (415) 703-7048
Email: victor.chan@cpuc.ca.gov

Mehboob Aslam
Public Advocates Office
Public Utilities Regulatory Analyst-V

Phone: (213) 576-7781
Email: mehboob.aslam@cpuc.ca.gov

Re: Public Advocates DR AMX-001 (General Office IT and Cybersecurity Capital Expenses)

Responses Due: October 9, 2020

INSTRUCTIONS

You are instructed to answer the following Data Requests in the written, verified responses per Public Utilities Code §§ 309.5, 314, 314.5, 581, 582 and Rules 1.1 and 10.1 of the California Public Utilities Commission's Rules of Practice and Procedure (Rules). Restate the text of each request prior to providing the response, and provide the name of the person(s) answering the request, the title of such person(s), and the name and title of the person they work for. With respect to each document produced, identify the number of the data request and question number that the document is responding to.

Responses should be provided both in the original electronic format, if available, and in hard copy. (If available in Word format, send the Word document and do not send the information as a PDF file.) All electronic documents submitted in response to this data request should be in readable, downloadable, printable, and searchable formats, unless use of such formats is infeasible. Each page should be numbered. If any of your answers refer to or reflect calculations, provide a copy of the supporting electronic files that were used to derive such

calculations, such as Excel-compatible spreadsheets or computer programs, with data and formulas intact and functioning. Documents produced in response to the data requests should be Bates-numbered, and indexed if voluminous. Responses to data requests that refer to or incorporate documents should identify the particular documents referenced by Bates-numbers or Bates-range.

Provide your response as it becomes available, but no later than the due date noted above. If you are unable to provide a response by this date, notify the Public Advocates Office as soon as possible, with a written explanation as to why the response date cannot be met and a best estimate of when the information can be provided. Each data request is continuing in nature so if any information provided changes, or new information becomes available that is responsive to a request, respondent is required to supplement its response to the Public Advocates Office.

If a request, definition, or an instruction, is unclear, notify the Public Advocates Office as soon as possible. In any event, answer the request to the fullest extent possible, specifying the reason for your inability to answer the remaining portion of the data request. For any questions, email the Public Advocates Office contact(s) above with a copy to the Public Advocates Office attorney.

In answering these data requests, the respondent should adhere to the Commission's Rules, with particular attention to Rule 1.1 of those Rules, which requires the respondent to "never mislead the Commission or its staff by an artifice or false statement of law or fact." The respondent should keep in mind that "Violations of Rule 1.1 can occur by a failure to correctly cite a proposition of law, a lack of candor, withholding information, providing incorrect information, or a failure to correct mistaken information."¹ Public Advocates Office expects the respondent to respond to these data requests with the highest level of candor.

Any and all claims of confidentiality must comport with Decision (D.) 17-09-023, D.16-08-024, and General Order 66-D.

Any objections to any data requests not received by the identified due date for responses are waived, notwithstanding any qualifying or conditional responses.

DEFINITIONS

Unless the request indicates otherwise, the following definitions are applicable in providing the requested information.

- I. The terms "document," "documents," or "documentary material" include, without limitation, the following items, whether in electronic form, printed, recorded, or written or reproduced by hand: reports, studies, statistics, projections, forecasts, decisions, and orders, intra-office and interoffice communications, correspondence, memoranda, financial data, summaries or records of conversations or interviews, statements, returns, diaries, calendars, work papers, graphs, notebooks, notes, charts, computations, plans,

¹ Administrative Law Judge's Ruling Denying Southern California Edison Company's Motion For Summary Adjudication Of Alleged Rule 1.1 Violations Related To Data Request Responses Dated December 10, 2010, I.09-01-018, January 10, 2012, p. 6.

drawings, sketches, computer printouts, summaries of records of meetings or conferences, summaries or reports of investigations or negotiations, opinions or reports of consultants, photographs, bulletins, records or representations or publications of any kind (including microfilm, videotape, and records however produced or reproduced), electronic or mechanical or electrical records of any kind (including, without limitation, tapes, tape cassettes, discs, emails, and records) other data compilations (including without limitation, input/output files, source codes, object codes, program documentation, computer programs, computer printouts, cards, tapes, discs and recordings used in automated data processing, together with the programming instructions and other material necessary to translate, understand, or use the same), and other documents or tangible things of whatever description which constitute or contain information within the scope of these data requests.

- II. “CPUC” or “Commission” as used herein refers to the California Public Utilities Commission.
- III. “Public Advocates Office” as used herein refers to the Public Advocates Office at the Public Utilities Commission.

DATA REQUESTS

- 1. Please fill in the attached MS Excel schedule for the following set of information for the period of 2014-2019:
 - a. Annual General Office Cybersecurity capital expenditures
 - i. These capital IT cybersecurity expenditures typically follow some Cybersecurity Framework, for example, one recommended by the National Institute of Standards and Technology (NIST). However, the requested information regarding cybersecurity capital expenditure reflects your Company’s own efforts toward improving the cybersecurity concerns with or without any framework.
 - ii. Please do NOT include the “expensed” part of these cybersecurity capital expenditures.
 - b. Annual General Office Information Technology (IT) capital expenditures (including the cybersecurity capital expenditures)
 - i. These are typical IT capital expenditures in GO such as Enterprise Resource Planning (ERP) systems, Customer Care and Billing system, Call Center/Management systems, Data Storage, Asset Management

systems, GIS, Servers, Personal Computers, Laptops, Hand-held Devices etc.

- ii. If your SCADA infrastructure is “centralized” in GO, then please separately provide the annual capital amounts. If SCADA resources are recorded in the specific service areas and ratemaking districts, then there is no need to include these amounts in the requested annual GO IT capital expenditure.
- iii. Please do NOT include the “expensed” part of these GO IT capital expenditures.
- iv. If you currently do NOT have a GO structure and are working as a single district utility, then provide the requested information (capital expenditure for both cybersecurity and IT resources) within your single district. However, separately identify your annual SCADA capitalized expenditure for the period (2014-2019).

End Request



Public Advocates Office
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, California 94102
Tel: 415-703-1584
www.publicadvocates.cpuc.ca.gov

Public Advocates Office DATA REQUEST: AMX-001

Date: October 2, 2020

To: Joel Reiker
VP, Regulatory Affairs
San Gabriel Valley Water Company

Email: jmreiker@sgvwater.com

From: **Victor Chan**
Public Advocates Office
Program & Project Supervisor

Phone: (415) 703-7048
Email: victor.chan@cpuc.ca.gov

Mehboob Aslam
Public Advocates Office
Public Utilities Regulatory Analyst-V

Phone: (213) 576-7781
Email: mehboob.aslam@cpuc.ca.gov

Re: Public Advocates DR AMX-001 (General Office IT and Cybersecurity Capital Expenses)

Responses Due: October 9, 2020

INSTRUCTIONS

You are instructed to answer the following Data Requests in the written, verified responses per Public Utilities Code §§ 309.5, 314, 314.5, 581, 582 and Rules 1.1 and 10.1 of the California Public Utilities Commission's Rules of Practice and Procedure (Rules). Restate the text of each request prior to providing the response, and provide the name of the person(s) answering the request, the title of such person(s), and the name and title of the person they work for. With respect to each document produced, identify the number of the data request and question number that the document is responding to.

Responses should be provided both in the original electronic format, if available, and in hard copy. (If available in Word format, send the Word document and do not send the information as a PDF file.) All electronic documents submitted in response to this data request should be in readable, downloadable, printable, and searchable formats, unless use of such formats is infeasible. Each page should be numbered. If any of your answers refer to or reflect calculations, provide a copy of the supporting electronic files that were used to derive such

calculations, such as Excel-compatible spreadsheets or computer programs, with data and formulas intact and functioning. Documents produced in response to the data requests should be Bates-numbered, and indexed if voluminous. Responses to data requests that refer to or incorporate documents should identify the particular documents referenced by Bates-numbers or Bates-range.

Provide your response as it becomes available, but no later than the due date noted above. If you are unable to provide a response by this date, notify the Public Advocates Office as soon as possible, with a written explanation as to why the response date cannot be met and a best estimate of when the information can be provided. Each data request is continuing in nature so if any information provided changes, or new information becomes available that is responsive to a request, respondent is required to supplement its response to the Public Advocates Office.

If a request, definition, or an instruction, is unclear, notify the Public Advocates Office as soon as possible. In any event, answer the request to the fullest extent possible, specifying the reason for your inability to answer the remaining portion of the data request. For any questions, email the Public Advocates Office contact(s) above with a copy to the Public Advocates Office attorney.

In answering these data requests, the respondent should adhere to the Commission's Rules, with particular attention to Rule 1.1 of those Rules, which requires the respondent to "never mislead the Commission or its staff by an artifice or false statement of law of fact." The respondent should keep in mind that "Violations of Rule 1.1 can occur by a failure to correctly cite a proposition of law, a lack of candor, withholding information, providing incorrect information, or a failure to correct mistaken information."¹ Public Advocates Office expects the respondent to respond to these data requests with the highest level of candor.

Any and all claims of confidentiality must comport with Decision (D.) 17-09-023, D.16-08-024, and General Order 66-D.

Any objections to any data requests not received by the identified due date for responses are waived, notwithstanding any qualifying or conditional responses.

DEFINITIONS

Unless the request indicates otherwise, the following definitions are applicable in providing the requested information.

- I. The terms "document," "documents," or "documentary material" include, without limitation, the following items, whether in electronic form, printed, recorded, or written or reproduced by hand: reports, studies, statistics, projections, forecasts, decisions, and orders, intra-office and interoffice communications, correspondence, memoranda, financial data, summaries or records of conversations or interviews, statements, returns, diaries, calendars, work papers, graphs, notebooks, notes, charts, computations, plans,

¹ Administrative Law Judge's Ruling Denying Southern California Edison Company's Motion For Summary Adjudication Of Alleged Rule 1.1 Violations Related To Data Request Responses Dated December 10, 2010, I.09-01-018, January 10, 2012, p. 6.

drawings, sketches, computer printouts, summaries of records of meetings or conferences, summaries or reports of investigations or negotiations, opinions or reports of consultants, photographs, bulletins, records or representations or publications of any kind (including microfilm, videotape, and records however produced or reproduced), electronic or mechanical or electrical records of any kind (including, without limitation, tapes, tape cassettes, discs, emails, and records) other data compilations (including without limitation, input/output files, source codes, object codes, program documentation, computer programs, computer printouts, cards, tapes, discs and recordings used in automated data processing, together with the programming instructions and other material necessary to translate, understand, or use the same), and other documents or tangible things of whatever description which constitute or contain information within the scope of these data requests.

- II. “CPUC” or “Commission” as used herein refers to the California Public Utilities Commission.
- III. “Public Advocates Office” as used herein refers to the Public Advocates Office at the Public Utilities Commission.

DATA REQUESTS

- 1. Please fill in the attached MS Excel schedule for the following set of information for the period of 2014-2019:
 - a. Annual General Office Cybersecurity capital expenditures
 - i. These capital IT cybersecurity expenditures typically follow some Cybersecurity Framework, for example, one recommended by the National Institute of Standards and Technology (NIST). However, the requested information regarding cybersecurity capital expenditure reflects your Company’s own efforts toward improving the cybersecurity concerns with or without any framework.
 - ii. Please do NOT include the “expensed” part of these cybersecurity capital expenditures.
 - b. Annual General Office Information Technology (IT) capital expenditures (including the cybersecurity capital expenditures)
 - i. These are typical IT capital expenditures in GO such as Enterprise Resource Planning (ERP) systems, Customer Care and Billing system, Call Center/Management systems, Data Storage, Asset Management

systems, GIS, Servers, Personal Computers, Laptops, Hand-held Devices etc.

- ii. If your SCADA infrastructure is “centralized” in GO, then please separately provide the annual capital amounts. If SCADA resources are recorded in the specific service areas and ratemaking districts, then there is no need to include these amounts in the requested annual GO IT capital expenditure.
- iii. Please do NOT include the “expensed” part of these GO IT capital expenditures.
- iv. If you currently do NOT have a GO structure and are working as a single district utility, then provide the requested information (capital expenditure for both cybersecurity and IT resources) within your single district. However, separately identify your annual SCADA capitalized expenditure for the period (2014-2019).

End Request



Public Advocates Office
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, California 94102
Tel: 415-703-1584
www.publicadvocates.cpuc.ca.gov

Public Advocates Office DATA REQUEST: AMX-001

Date: October 2, 2020

To: Tim Guster
General Counsel
Great Oaks Water Company

Email: tguster@greatoakswater.com

From: Victor Chan
Public Advocates Office
Program & Project Supervisor

Phone: (415) 703-7048
Email: victor.chan@cpuc.ca.gov

Mehboob Aslam
Public Advocates Office
Public Utilities Regulatory Analyst-V

Phone: (213) 576-7781
Email: mehboob.aslam@cpuc.ca.gov

Re: Public Advocates DR AMX-001 (General Office IT and Cybersecurity Capital Expenses)

Responses Due: October 9, 2020

INSTRUCTIONS

You are instructed to answer the following Data Requests in the written, verified responses per Public Utilities Code §§ 309.5, 314, 314.5, 581, 582 and Rules 1.1 and 10.1 of the California Public Utilities Commission's Rules of Practice and Procedure (Rules). Restate the text of each request prior to providing the response, and provide the name of the person(s) answering the request, the title of such person(s), and the name and title of the person they work for. With respect to each document produced, identify the number of the data request and question number that the document is responding to.

Responses should be provided both in the original electronic format, if available, and in hard copy. (If available in Word format, send the Word document and do not send the information as a PDF file.) All electronic documents submitted in response to this data request should be in readable, downloadable, printable, and searchable formats, unless use of such formats is infeasible. Each page should be numbered. If any of your answers refer to or reflect calculations, provide a copy of the supporting electronic files that were used to derive such

calculations, such as Excel-compatible spreadsheets or computer programs, with data and formulas intact and functioning. Documents produced in response to the data requests should be Bates-numbered, and indexed if voluminous. Responses to data requests that refer to or incorporate documents should identify the particular documents referenced by Bates-numbers or Bates-range.

Provide your response as it becomes available, but no later than the due date noted above. If you are unable to provide a response by this date, notify the Public Advocates Office as soon as possible, with a written explanation as to why the response date cannot be met and a best estimate of when the information can be provided. Each data request is continuing in nature so if any information provided changes, or new information becomes available that is responsive to a request, respondent is required to supplement its response to the Public Advocates Office.

If a request, definition, or an instruction, is unclear, notify the Public Advocates Office as soon as possible. In any event, answer the request to the fullest extent possible, specifying the reason for your inability to answer the remaining portion of the data request. For any questions, email the Public Advocates Office contact(s) above with a copy to the Public Advocates Office attorney.

In answering these data requests, the respondent should adhere to the Commission's Rules, with particular attention to Rule 1.1 of those Rules, which requires the respondent to "never mislead the Commission or its staff by an artifice or false statement of law or fact." The respondent should keep in mind that "Violations of Rule 1.1 can occur by a failure to correctly cite a proposition of law, a lack of candor, withholding information, providing incorrect information, or a failure to correct mistaken information."¹ Public Advocates Office expects the respondent to respond to these data requests with the highest level of candor.

Any and all claims of confidentiality must comport with Decision (D.) 17-09-023, D.16-08-024, and General Order 66-D.

Any objections to any data requests not received by the identified due date for responses are waived, notwithstanding any qualifying or conditional responses.

DEFINITIONS

Unless the request indicates otherwise, the following definitions are applicable in providing the requested information.

- I. The terms "document," "documents," or "documentary material" include, without limitation, the following items, whether in electronic form, printed, recorded, or written or reproduced by hand: reports, studies, statistics, projections, forecasts, decisions, and orders, intra-office and interoffice communications, correspondence, memoranda, financial data, summaries or records of conversations or interviews, statements, returns, diaries, calendars, work papers, graphs, notebooks, notes, charts, computations, plans,

¹ Administrative Law Judge's Ruling Denying Southern California Edison Company's Motion For Summary Adjudication Of Alleged Rule 1.1 Violations Related To Data Request Responses Dated December 10, 2010, I.09-01-018, January 10, 2012, p. 6.

drawings, sketches, computer printouts, summaries of records of meetings or conferences, summaries or reports of investigations or negotiations, opinions or reports of consultants, photographs, bulletins, records or representations or publications of any kind (including microfilm, videotape, and records however produced or reproduced), electronic or mechanical or electrical records of any kind (including, without limitation, tapes, tape cassettes, discs, emails, and records) other data compilations (including without limitation, input/output files, source codes, object codes, program documentation, computer programs, computer printouts, cards, tapes, discs and recordings used in automated data processing, together with the programming instructions and other material necessary to translate, understand, or use the same), and other documents or tangible things of whatever description which constitute or contain information within the scope of these data requests.

- II. “CPUC” or “Commission” as used herein refers to the California Public Utilities Commission.
- III. “Public Advocates Office” as used herein refers to the Public Advocates Office at the Public Utilities Commission.

DATA REQUESTS

- 1. Please fill in the attached MS Excel schedule for the following set of information for the period of 2014-2019:
 - a. Annual General Office Cybersecurity capital expenditures
 - i. These capital IT cybersecurity expenditures typically follow some Cybersecurity Framework, for example, one recommended by the National Institute of Standards and Technology (NIST). However, the requested information regarding cybersecurity capital expenditure reflects your Company’s own efforts toward improving the cybersecurity concerns with or without any framework.
 - ii. Please do NOT include the “expensed” part of these cybersecurity capital expenditures.
 - b. Annual General Office Information Technology (IT) capital expenditures (including the cybersecurity capital expenditures)
 - i. These are typical IT capital expenditures in GO such as Enterprise Resource Planning (ERP) systems, Customer Care and Billing system, Call Center/Management systems, Data Storage, Asset Management

systems, GIS, Servers, Personal Computers, Laptops, Hand-held Devices etc.

- ii. If your SCADA infrastructure is “centralized” in GO, then please separately provide the annual capital amounts. If SCADA resources are recorded in the specific service areas and ratemaking districts, then there is no need to include these amounts in the requested annual GO IT capital expenditure.
- iii. Please do NOT include the “expensed” part of these GO IT capital expenditures.
- iv. If you currently do NOT have a GO structure and are working as a single district utility, then provide the requested information (capital expenditure for both cybersecurity and IT resources) within your single district. However, separately identify your annual SCADA capitalized expenditure for the period (2014-2019).

End Request



Public Advocates Office
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, California 94102
Tel: 415-703-1584
www.publicadvocates.cpuc.ca.gov

Public Advocates Office DATA REQUEST: AMX-001

Date: October 2, 2020

To: John Tang
VP, Regulatory Affairs & Government Relations
San Jose Water Company
Email: John.tang@sjwater.com

From: Victor Chan
Public Advocates Office
Program & Project Supervisor
Phone: (415) 703-7048
Email: victor.chan@cpuc.ca.gov

Mehboob Aslam
Public Advocates Office
Public Utilities Regulatory Analyst-V
Phone: (213) 576-7781
Email: mehboob.aslam@cpuc.ca.gov

Re: Public Advocates DR AMX-001 (General Office IT and Cybersecurity Capital Expenses)

Responses Due: October 9, 2020

INSTRUCTIONS

You are instructed to answer the following Data Requests in the written, verified responses per Public Utilities Code §§ 309.5, 314, 314.5, 581, 582 and Rules 1.1 and 10.1 of the California Public Utilities Commission's Rules of Practice and Procedure (Rules). Restate the text of each request prior to providing the response, and provide the name of the person(s) answering the request, the title of such person(s), and the name and title of the person they work for. With respect to each document produced, identify the number of the data request and question number that the document is responding to.

Responses should be provided both in the original electronic format, if available, and in hard copy. (If available in Word format, send the Word document and do not send the information as a PDF file.) All electronic documents submitted in response to this data request should be in readable, downloadable, printable, and searchable formats, unless use of such formats is infeasible. Each page should be numbered. If any of your answers refer to or reflect

calculations, provide a copy of the supporting electronic files that were used to derive such calculations, such as Excel-compatible spreadsheets or computer programs, with data and formulas intact and functioning. Documents produced in response to the data requests should be Bates-numbered, and indexed if voluminous. Responses to data requests that refer to or incorporate documents should identify the particular documents referenced by Bates-numbers or Bates-range.

Provide your response as it becomes available, but no later than the due date noted above. If you are unable to provide a response by this date, notify the Public Advocates Office as soon as possible, with a written explanation as to why the response date cannot be met and a best estimate of when the information can be provided. Each data request is continuing in nature so if any information provided changes, or new information becomes available that is responsive to a request, respondent is required to supplement its response to the Public Advocates Office.

If a request, definition, or an instruction, is unclear, notify the Public Advocates Office as soon as possible. In any event, answer the request to the fullest extent possible, specifying the reason for your inability to answer the remaining portion of the data request. For any questions, email the Public Advocates Office contact(s) above with a copy to the Public Advocates Office attorney.

In answering these data requests, the respondent should adhere to the Commission's Rules, with particular attention to Rule 1.1 of those Rules, which requires the respondent to "never mislead the Commission or its staff by an artifice or false statement of law or fact." The respondent should keep in mind that "Violations of Rule 1.1 can occur by a failure to correctly cite a proposition of law, a lack of candor, withholding information, providing incorrect information, or a failure to correct mistaken information."¹ Public Advocates Office expects the respondent to respond to these data requests with the highest level of candor.

Any and all claims of confidentiality must comport with Decision (D.) 17-09-023, D.16-08-024, and General Order 66-D.

Any objections to any data requests not received by the identified due date for responses are waived, notwithstanding any qualifying or conditional responses.

DEFINITIONS

Unless the request indicates otherwise, the following definitions are applicable in providing the requested information.

- I. The terms "document," "documents," or "documentary material" include, without limitation, the following items, whether in electronic form, printed, recorded, or written or reproduced by hand: reports, studies, statistics, projections, forecasts, decisions, and orders, intra-office and interoffice communications, correspondence, memoranda, financial data, summaries or records of conversations or interviews, statements, returns,

¹ Administrative Law Judge's Ruling Denying Southern California Edison Company's Motion For Summary Adjudication Of Alleged Rule 1.1 Violations Related To Data Request Responses Dated December 10, 2010, I.09-01-018, January 10, 2012, p. 6.

diaries, calendars, work papers, graphs, notebooks, notes, charts, computations, plans, drawings, sketches, computer printouts, summaries of records of meetings or conferences, summaries or reports of investigations or negotiations, opinions or reports of consultants, photographs, bulletins, records or representations or publications of any kind (including microfilm, videotape, and records however produced or reproduced), electronic or mechanical or electrical records of any kind (including, without limitation, tapes, tape cassettes, discs, emails, and records) other data compilations (including without limitation, input/output files, source codes, object codes, program documentation, computer programs, computer printouts, cards, tapes, discs and recordings used in automated data processing, together with the programming instructions and other material necessary to translate, understand, or use the same), and other documents or tangible things of whatever description which constitute or contain information within the scope of these data requests.

- II. “CPUC” or “Commission” as used herein refers to the California Public Utilities Commission.
- III. “Public Advocates Office” as used herein refers to the Public Advocates Office at the Public Utilities Commission.

DATA REQUESTS

- 1. Please fill in the attached MS Excel schedule for the following set of information for the period of 2014-2019:
 - a. Annual General Office Cybersecurity capital expenditures
 - i. These capital IT cybersecurity expenditures typically follow some Cybersecurity Framework, for example, one recommended by the National Institute of Standards and Technology (NIST). However, the requested information regarding cybersecurity capital expenditure reflects your Company’s own efforts toward improving the cybersecurity concerns with or without any framework.
 - ii. Please do NOT include the “expensed” part of these cybersecurity capital expenditures.
 - b. Annual General Office Information Technology (IT) capital expenditures (including the cybersecurity capital expenditures)
 - i. These are typical IT capital expenditures in GO such as Enterprise Resource Planning (ERP) systems, Customer Care and Billing system, Call Center/Management systems, Data Storage, Asset Management

systems, GIS, Servers, Personal Computers, Laptops, Hand-held Devices etc.

- ii. If your SCADA infrastructure is “centralized” in GO, then please separately provide the annual capital amounts. If SCADA resources are recorded in the specific service areas and ratemaking districts, then there is no need to include these amounts in the requested annual GO IT capital expenditure.
- iii. Please do NOT include the “expensed” part of these GO IT capital expenditures.
- iv. If you currently do NOT have a GO structure and are working as a single district utility, then provide the requested information (capital expenditure for both cybersecurity and IT resources) within your single district. However, separately identify your annual SCADA capitalized expenditure for the period (2014-2019).

End Request



Public Advocates Office
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, California 94102
Tel: 415-703-1584
www.publicadvocates.cpuc.ca.gov

Public Advocates Office DATA REQUEST: AMX-001

Date: October 2, 2020

To: Robert Kelly
VP, Regulatory Affairs
Southwest Water Company

Email: bkelly@swwc.com

From: Victor Chan
Public Advocates Office
Program & Project Supervisor

Phone: (415) 703-7048
Email: victor.chan@cpuc.ca.gov

Mehboob Aslam
Public Advocates Office
Public Utilities Regulatory Analyst-V

Phone: (213) 576-7781
Email: mehboob.aslam@cpuc.ca.gov

Re: Public Advocates DR AMX-001 (General Office IT and Cybersecurity Capital Expenses)

Responses Due: October 9, 2020

INSTRUCTIONS

You are instructed to answer the following Data Requests in the written, verified responses per Public Utilities Code §§ 309.5, 314, 314.5, 581, 582 and Rules 1.1 and 10.1 of the California Public Utilities Commission's Rules of Practice and Procedure (Rules). Restate the text of each request prior to providing the response, and provide the name of the person(s) answering the request, the title of such person(s), and the name and title of the person they work for. With respect to each document produced, identify the number of the data request and question number that the document is responding to.

Responses should be provided both in the original electronic format, if available, and in hard copy. (If available in Word format, send the Word document and do not send the information as a PDF file.) All electronic documents submitted in response to this data request should be in readable, downloadable, printable, and searchable formats, unless use of such formats is infeasible. Each page should be numbered. If any of your answers refer to or reflect calculations, provide a copy of the supporting electronic files that were used to derive such

calculations, such as Excel-compatible spreadsheets or computer programs, with data and formulas intact and functioning. Documents produced in response to the data requests should be Bates-numbered, and indexed if voluminous. Responses to data requests that refer to or incorporate documents should identify the particular documents referenced by Bates-numbers or Bates-range.

Provide your response as it becomes available, but no later than the due date noted above. If you are unable to provide a response by this date, notify the Public Advocates Office as soon as possible, with a written explanation as to why the response date cannot be met and a best estimate of when the information can be provided. Each data request is continuing in nature so if any information provided changes, or new information becomes available that is responsive to a request, respondent is required to supplement its response to the Public Advocates Office.

If a request, definition, or an instruction, is unclear, notify the Public Advocates Office as soon as possible. In any event, answer the request to the fullest extent possible, specifying the reason for your inability to answer the remaining portion of the data request. For any questions, email the Public Advocates Office contact(s) above with a copy to the Public Advocates Office attorney.

In answering these data requests, the respondent should adhere to the Commission's Rules, with particular attention to Rule 1.1 of those Rules, which requires the respondent to "never mislead the Commission or its staff by an artifice or false statement of law or fact." The respondent should keep in mind that "Violations of Rule 1.1 can occur by a failure to correctly cite a proposition of law, a lack of candor, withholding information, providing incorrect information, or a failure to correct mistaken information."¹ Public Advocates Office expects the respondent to respond to these data requests with the highest level of candor.

Any and all claims of confidentiality must comport with Decision (D.) 17-09-023, D.16-08-024, and General Order 66-D.

Any objections to any data requests not received by the identified due date for responses are waived, notwithstanding any qualifying or conditional responses.

DEFINITIONS

Unless the request indicates otherwise, the following definitions are applicable in providing the requested information.

- I. The terms "document," "documents," or "documentary material" include, without limitation, the following items, whether in electronic form, printed, recorded, or written or reproduced by hand: reports, studies, statistics, projections, forecasts, decisions, and orders, intra-office and interoffice communications, correspondence, memoranda, financial data, summaries or records of conversations or interviews, statements, returns, diaries, calendars, work papers, graphs, notebooks, notes, charts, computations, plans,

¹ Administrative Law Judge's Ruling Denying Southern California Edison Company's Motion For Summary Adjudication Of Alleged Rule 1.1 Violations Related To Data Request Responses Dated December 10, 2010, I.09-01-018, January 10, 2012, p. 6.

drawings, sketches, computer printouts, summaries of records of meetings or conferences, summaries or reports of investigations or negotiations, opinions or reports of consultants, photographs, bulletins, records or representations or publications of any kind (including microfilm, videotape, and records however produced or reproduced), electronic or mechanical or electrical records of any kind (including, without limitation, tapes, tape cassettes, discs, emails, and records) other data compilations (including without limitation, input/output files, source codes, object codes, program documentation, computer programs, computer printouts, cards, tapes, discs and recordings used in automated data processing, together with the programming instructions and other material necessary to translate, understand, or use the same), and other documents or tangible things of whatever description which constitute or contain information within the scope of these data requests.

- II. “CPUC” or “Commission” as used herein refers to the California Public Utilities Commission.
- III. “Public Advocates Office” as used herein refers to the Public Advocates Office at the Public Utilities Commission.

DATA REQUESTS

- 1. Please fill in the attached MS Excel schedule for the following set of information for the period of 2014-2019:
 - a. Annual General Office Cybersecurity capital expenditures
 - i. These capital IT cybersecurity expenditures typically follow some Cybersecurity Framework, for example, one recommended by the National Institute of Standards and Technology (NIST). However, the requested information regarding cybersecurity capital expenditure reflects your Company’s own efforts toward improving the cybersecurity concerns with or without any framework.
 - ii. Please do NOT include the “expensed” part of these cybersecurity capital expenditures.
 - b. Annual General Office Information Technology (IT) capital expenditures (including the cybersecurity capital expenditures)
 - i. These are typical IT capital expenditures in GO such as Enterprise Resource Planning (ERP) systems, Customer Care and Billing system, Call Center/Management systems, Data Storage, Asset Management

systems, GIS, Servers, Personal Computers, Laptops, Hand-held Devices etc.

- ii. If your SCADA infrastructure is “centralized” in GO, then please separately provide the annual capital amounts. If SCADA resources are recorded in the specific service areas and ratemaking districts, then there is no need to include these amounts in the requested annual GO IT capital expenditure.
- iii. Please do NOT include the “expensed” part of these GO IT capital expenditures.
- iv. If you currently do NOT have a GO structure and are working as a single district utility, then provide the requested information (capital expenditure for both cybersecurity and IT resources) within your single district. However, separately identify your annual SCADA capitalized expenditure for the period (2014-2019).

End Request

REBUTTAL TESTIMONY OF RANDELL MILLER

**ATTACHMENT 2 – CAL ADVOCATES’ REPORT ON GENERAL
OFFICE ATTACHMENT 5**

ATTACHMENT 2

CALIFORNIA WATER SERVICE COMPANY						
	2014	2015	2016	2017	2018	2019
Cybersecurity Capital Expenditure	\$0	\$0	\$0	\$7,356	\$361,358	\$270,673
IT Capital Expenditure	\$8,773,642	\$7,669,247	\$23,871,386	\$9,748,156	\$8,555,928	\$14,079,672
Operating Revenues	\$554,110,749	\$541,794,887	\$558,724,313	\$611,801,625	\$642,699,327	\$656,195,730
Number of Customers	459,689	462,189	464,328	466,523	468,484	470,815
						465,338
						\$106,565
						\$12,116,339
						\$594,221,105
						0.018%
						\$0.23
						\$26.04

SAN GABRIEL VALLEY WATER COMPANY						
	2014	2015	2016	2017	2018	2019
Cybersecurity Capital Expenditure	\$26,598	\$0	\$0	\$0	\$0	\$21,834
IT Capital Expenditure	\$172,622	\$322,314	\$83,096	\$184,927	\$617,615	\$4,609,229
Operating Revenues	\$117,369,194	\$118,566,877	\$126,110,105	\$145,272,112	\$153,567,979	\$154,591,835
Number of Customers	91,703	92,112	92,577	95,345	95,984	96,618
						94,057
						\$8,072
						\$988,300
						\$136,246,350
						0.006%
						\$0.086
						\$10.51

GREAT OAKS WATER COMPANY						
	2014	2015	2016	2017	2018	2019
Cybersecurity Capital Expenditure	\$1,762	\$2,696	\$9,641	\$22,338	\$6,887	\$5,356
IT Capital Expenditure	\$27,670	\$45,940	\$58,275	\$25,948	\$43,378	\$42,535
Operating Revenues	\$15,651,628	\$14,510,511	\$15,436,052	\$16,952,520	\$19,168,770	\$19,802,903
Number of Customers	20,634	20,785	21,003	21,195	21,281	21,324
						21,037
						\$8,113
						\$24,535
						\$16,920,397
						0.048%
						\$0.386
						\$0.003

SAN JOSE WATER COMPANY						
	2014	2015	2016	2017	2018	2019
Cybersecurity Capital Expenditure	\$518,725	\$347,883	\$147,964	\$522,270	\$724,520	\$308,108
IT Capital Expenditure	\$1,280,204	\$3,911,876	\$2,364,027	\$2,018,874	\$1,860,642	\$2,453,780
Operating Revenues	\$292,196,214	\$278,073,496	\$311,640,629	\$359,430,889	\$369,843,456	\$367,608,910
Number of Customers	223,788	224,322	224,544	225,011	225,819	226,434
						224,986
						\$1,903
						\$329,798,932
						0.13%
						\$10.906

SUBURBAN WATER SYSTEMS						
	2014	2015	2016	2017	2018	2019
Cybersecurity Capital Expenditure	\$44,451	\$202,390	\$186,900	\$70,300	\$155,708	\$202,205
IT Capital Expenditure	\$1,124,011	\$1,696,565	\$1,037,239	\$1,423,613	\$3,648,084	\$2,598,444
Operating Revenues	\$292,196,214	\$278,073,496	\$311,640,629	\$359,430,889	\$369,843,456	\$367,608,910
Number of Customers	223,788	224,322	224,544	225,011	225,819	226,434
						224,986
						\$143,659
						\$1,921,326
						\$329,798,932
						0.044%
						\$0.639
						\$0.006

GOLDEN STATE WATER COMPANY						
	2014	2015	2016	2017	2018	2019
Cybersecurity Capital Expenditure	\$75,757	\$40,825	\$154,939	\$424,482	\$727,533	\$164,042
IT Capital Expenditure	\$2,988,695	\$3,023,627	\$2,909,513	\$2,639,970	\$2,336,919	\$2,799,856
Operating Revenues	\$319,918,571	\$323,778,375	\$298,157,714	\$304,480,221	\$293,379,731	\$317,823,337
Number of Customers	257,968	259,391	260,766	260,168	259,573	260,454
						259,720
						\$264,596
						\$2,799,856
						\$309,589,652
						0.085%
						\$1.019
						\$10.780

Industry Average		
	Cybersecurity Cap. Exp.	IT Cap. Exp.
Per Operating Revenues	0.049%	0.868%
Per Number of Customers	\$0.648	\$9.492

GSWC		
	IT Cap. Exp.	Other Class-A Water Utilities
Per Operating Revenues	0.085%	0.049%
Per Number of Customers	\$1.019	\$0.648
		\$9.492

REBUTTAL TESTIMONY OF RANDELL MILLER

**ATTACHMENT 3 – GSWC CORRECTED ATTACHMENT 5 OF CAL
ADVOCATES' REPORT ON GENERAL OFFICE**

ATTACHMENT 3

CALIFORNIA WATER SERVICE COMPANY									
	2014	2015	2016	2017	2018	2019	Average	CyberSec.per Op.Rev. & No. of Customers	IT per Op. Rev. & No. of Customers
Cybersecurity Capital Expenditure	\$0	\$0	\$0	\$7,356	\$361,358	\$270,673	\$106,565		
IT Capital Expenditure	\$8,773,642	\$7,669,247	\$23,871,386	\$9,748,156	\$8,555,928	\$14,079,672	\$12,116,339		
Operating Revenues	\$554,110,749	\$541,794,887	\$558,724,313	\$611,801,625	\$642,699,327	\$656,195,730	\$594,221,105	0.018%	2.04%
Number of Customers	459,689	462,189	464,328	466,523	468,484	470,815	465,338	\$0.23	\$26.04
SAN GABRIEL VALLEY WATER COMPANY									
	2014	2015	2016	2017	2018	2019	Average	CyberSec.per Op.Rev. & No. of Customers	IT per Op. Rev. & No. of Customers
Cybersecurity Capital Expenditure	\$26,598	\$0	\$0	\$0	\$0	\$21,834	\$8,072		
IT Capital Expenditure	\$112,622	\$322,314	\$83,096	\$184,927	\$617,615	\$4,609,229	\$988,300		
Operating Revenues	\$117,369,194	\$118,566,877	\$126,110,105	\$145,272,112	\$155,567,979	\$154,591,835	\$136,246,350	0.006%	0.73%
Number of Customers	91,703	92,112	92,577	95,345	95,984	96,618	94,057	\$0.086	\$10.51
GREAT OAKS WATER COMPANY									
	2014	2015	2016	2017	2018	2019	Average	CyberSec.per Op.Rev. & No. of Customers	IT per Op. Rev. & No. of Customers
Cybersecurity Capital Expenditure	\$1,762	\$2,696	\$9,641	\$22,338	\$6,887	\$5,356	\$8,113		
IT Capital Expenditure	\$27,670	\$45,940	\$58,275	\$25,948	\$54,001	\$43,378	\$42,535		
Operating Revenues	\$15,651,628	\$14,510,511	\$15,436,052	\$16,952,520	\$19,168,770	\$19,802,903	\$16,920,397	0.048%	0.251%
Number of Customers	20,634	20,785	21,003	21,195	21,281	21,324	21,037	\$0.386	\$2.022
CalPA Reported → \$0.003 ← % Variance 67398%									
SAN JOSE WATER COMPANY									
	2014	2015	2016	2017	2018	2019	Average	CyberSec.per Op.Rev. & No. of Customers	IT per Op. Rev. & No. of Customers
Cybersecurity Capital Expenditure	\$518,725	\$347,883	\$147,964	\$522,270	\$724,520	\$308,108	\$428,245		
IT Capital Expenditure	\$1,280,204	\$3,911,876	\$2,364,027	\$2,018,874	\$1,860,642	\$3,287,058	\$2,453,780		
Operating Revenues	\$292,196,214	\$278,073,496	\$311,640,629	\$359,430,889	\$369,843,456	\$367,608,910	\$329,798,932	0.13%	0.74%
Number of Customers	223,788	224,322	224,544	225,011	225,819	226,434	224,986	\$1.903	\$10.906
SUBURBAN WATER SYSTEMS									
	2014	2015	2016	2017	2018	2019	Corrected Average	CyberSec.per Op.Rev. & No. of Customers	IT per Op. Rev. & No. of Customers
Cybersecurity Capital Expenditure	\$44,451	\$202,390	\$186,900	\$70,300	\$155,708	\$202,205	\$143,659		
IT Capital Expenditure	\$1,168,462	\$1,898,955	\$1,224,139	\$1,493,913	\$3,803,792	\$2,800,649	\$2,064,985		
Operating Revenues	\$72,822,594	\$70,971,020	\$72,401,774	\$76,655,885	\$81,985,626	\$81,236,662	\$76,012,260	0.189%	2.72%
Number of Customers	75,944	76,078	76,138	76,202	76,336	76,455	76,192	\$1.885	\$27.102
CalPA Reported → \$1,921,326 ← % Variance -7%									
→ \$329,798,932 ← 434%									
→ 224,986 ← 295%									
← \$0.006 451705%									
GOLDEN STATE WATER COMPANY									
	2014	2015	2016	2017	2018	2019	Corrected Average	CyberSec.per Op.Rev. & No. of Customers	IT per Op. Rev. & No. of Customers
Cybersecurity Capital Expenditure	\$57,143	\$30,794	\$116,870	\$320,187	\$548,778	\$123,737	\$199,585		
IT Capital Expenditure ²	\$2,590,352	\$4,024,842	\$2,142,568	\$1,312,682	\$4,247,917	\$2,341,186	\$2,776,591		
Operating Revenues	\$319,918,571	\$323,778,375	\$298,157,774	\$304,480,221	\$293,379,731	\$317,823,237	\$309,589,652	0.064%	0.897%
Number of Customers	257,968	259,391	260,766	260,168	259,573	260,454	259,720	\$0.768	\$10.91
CalPA Reported 0.085% CalPA Reported 0.904%									
\$1,019 \$10.780									

¹ Corrected to include historical cybersecurity capital spend for Corporate IT Shared Services (Randell Miller) at 75.43%, which was the impact to GSWC Water ratepayers.

² Corrected to include historical IT capital spend for Field Tech IT (Patrick Kubiak) and CSC (Jon Pierotti) at 100% (except

for the 2019 MWM project which was a cost center "U" project (at 89.58%) and the historical IT capital spend of

Corporate IT Shared Services (Randell Miller) at 75.43%, which was the impact to GSWC Water ratepayers.

REBUTTAL TESTIMONY OF RANDELL MILLER

**ATTACHMENT 4 – SUBURBAN WATER SYSTEMS RESPONSE TO
DATA REQUEST AMX-001**

ATTACHMENT 4

SouthWest Water Corporate						
Requested Items	2014	2015	2016	2017	2018	2019
Annual Cybersecurity Related Capital Expenditures	\$44,451	\$202,390	\$186,900	\$70,300	\$155,708	\$202,205
Annual Total IT Capital Expenditures (Excluding Cybersecurity)	\$1,168,462	\$1,898,955	\$1,224,139	\$1,493,913	\$3,803,792	\$2,800,649
SCADA Capitalized Expenditure (If centralized in GO)						
SCADA Capitalized Expenditure (If no GO structure and operate under single district)						

Notes:

1. Per the Data Request AMX-001, the data request on page 3 notes that Capital IT cybersecurity expenditures typically follow a Cyber Security Framework and uses the National Institute of Standards and Technology (NIST) as an example.

SouthWest Water does in fact use NIST as its cyber security methodology

2. The Data Request asks for both Capital IT cybersecurity expenditures and Annual General Office Information Technology (IT) capital expenditures (including the cybersecurity capital expenditures). However this spreadsheet provided as part of the Data Request indicates Capital IT cybersecurity expenditures and Annual General Office Information Technology (IT) capital expenditures (**excluding** the cybersecurity capital expenditures). The response assumes that the intent was including cybersecurity capital expenses as written in the document.

3. Rows 6 and 7 in the spreadsheet do not apply to SouthWest Water corporate

REBUTTAL TESTIMONY OF RANDELL MILLER

**ATTACHMENT 5 – CWSC’S DATA REQUEST RESPONSE TO DATA
REQUEST AMX-001**

ATTACHMENT 5

California Water Service Company								
Requested Items	2014	2015	2016	2017	2018	2019		
Annual Cybersecurity Related Capital Expenditures	-	-	-	7,356	361,358	270,673		
Annual Total IT Capital Expenditures (Excluding Cybersecurity)	8,773,642	7,669,247	23,871,386	9,748,156	8,555,928	14,079,672		
SCADA Capitalized Expenditure (If centralized in GO)	252,706	198,337	493,460	-	-	7,738,441		
SCADA Capitalized Expenditure (If no GO structure and operate under single district)	n/a	n/a	n/a	n/a	n/a	n/a		

CWS Response Note 1: All amounts provided above represent the amounts associated with capital projects that have been closed to plant.
 CWS Response Note 2: Row 5, above, states "excluding cybersecurity" in parentheses. This is inconsistent with Question 1.b, below. Cal Water has chosen to exclude cybersecurity, consistent with the language in Row 5.

REBUTTAL TESTIMONY OF RANDELL MILLER

ATTACHMENT 6 – DATA REQUEST REM-01



Public Advocates Office
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102
Phone: (415) 703-1584
<http://publicadvocates.ca.gov>

Public Advocates Office Data Response
A.20-07-012: Golden State Water Company (GSWC)
2022-2024 General Rate Case

Date: February 23, 2021

To: **Keith Switzer** Phone: (909) 394-3600
GSWC Vice President, Regulatory Affairs Email: kswitzer@gswater.com

Joseph M. Karp Phone: (415) 591-1000
Attorney for GSWC Email: jkarp@winston.com

From: **Victor Chan** Phone: (213) 576-7048
Public Advocates Office Email: victor.chan@cpuc.ca.gov
Project Lead

Shanna Foley Phone: (213) 620-2465
Public Advocates Office Email: shanna.foley@cpuc.ca.gov
Attorney

Mehboob Aslam Phone: (213) 576-7781
Public Advocates Office Email: mehboob.aslam@cpuc.ca.gov

Re: GSWC Data Request No. REM-01 (GO IT and Security Capital)

GENERAL OBJECTIONS

The Public Advocates Office provides the following responses to GSWC's Data Request (DR) REM-01 to the Public Advocates Office dated February 17, 2021.

Questions from GSWC's DR REM-01 are reproduced below, followed by Public Advocates Office Responses, solely for ease of reference. The Public Advocates Office does not adopt or admit any question or any portion of any question as correct or true. The Public Advocates Office reserves the right to supplement, clarify, revise, or correct any or all of the responses and objections

herein, and to assert additional objections or privileges, in one or more subsequent supplemental response(s). Responses pertaining to questions of law or legal conclusions have been prepared with the assistance of counsel.

The Public Advocates Office objects to each data request to the extent it mischaracterizes Public Advocates Office's Opening Testimony.

The Public Advocates Office objects to each data request to the extent it is overly broad, unduly burdensome, or not reasonably calculated to lead to the discovery of admissible evidence.

The Public Advocates Office objects to each instruction, definition, and data request to the extent that it seeks information or documents protected from disclosure by the attorney-client privilege, attorney work product doctrine, or any other applicable privilege.

The Public Advocates Office objects to each instruction, definition, and data request as overbroad and unduly burdensome to the extent it seeks documents or information that are readily or more accessible to GSWC from GSWC's own files, from documents or information in GSWC's possession, or from documents or information that GSWC previously produced to the Public Advocates Office. Responding to such requests would be oppressive, unduly burdensome, and unnecessarily expensive, and the burden of responding to such requests is substantially the same or less for GSWC as for the Public Advocates Office. All such documents and information will not be produced.

The Public Advocates Office incorporates by reference every general objection set forth above into each specific response set forth below. A specific response may repeat a general objection for emphasis or some other reason. The failure to include any general objection in any specific response does not waive any general objection to that request.

Question 1:

Referring to pages 94-95 of the Report and Recommendations on General Office (Public Version), please provide the following information:

a. The raw data provided by the Other Class-A Water Utilities in the exact format received in response to the data request they were issued.

ANSWER 1(a):

Please find the following Excel files containing the raw data provided by the various Class-A utilities:

- 1) Cal Water Response
- 2) Great Oaks Response
- 3) San Gabriel Valley Water Response
- 4) San Jose Water Response
- 5) Suburban Water Response

b. Any written explanation provided by the Other Class-A Water Utilities that accompanied their initial responses.

ANSWER 1(b):

The Excel files provided in response to question 1(a) above contain Class-A Utilities' respective written explanations as well.

c. Any subsequent questions asked by the Public Advocates Office and the answers provided by the Other Class-A Water Utilities regarding the initial information submitted.

ANSWER 1(c):

None

d. Provide the source for any information included in Attachment 5 that was not provided by the Other Class-A Water Utilities.

ANSWER 1(d):

The referenced Attachment 5 includes 1) Operating Revenues, and 2) Number of Customers data for the period of 2014-2019 for the Class-A Water Utilities listed in the Attachment. Cal Advocates obtain this data from the Annual Reports of these Class-A Utilities. These Annual Reports are available on the Commission's Division of Water and Audit website:

<https://www.cpuc.ca.gov/water/>

e. Provide Attachment 5 in MS Excel format and include any formulas.

ANSWER 1(e):

See attached Excel file: Cal Advocates_IT & Cybersecurity_Analysis

The formulas are embedded in the Excel spreadsheet.

END OF RESPONSE

REBUTTAL TESTIMONY OF RANDELL MILLER

ATTACHMENT 7 – CWSC’S SETTLEMENT CHAPTER 13

CHAPTER 13. CUSTOMER SUPPORT SERVICES PLANT

10) 99477 –PROCURE INTRUSION PREVENTION SYSTEM

PID(s)	Year	Application	ORA Report	Settlement
99477	2017	\$344,605	\$0	\$344,605

ISSUE: Cal Water proposed this IT security project to help protect its network from sophisticated hacking and cyber-attacks. In 2013, Cal Water hired a consultant to evaluate its IT security and to make recommendations for improvements. Cal Water stated that this study indicated that the network would greatly benefit from an intrusion prevention and detection system on the corporate network and Supervisory Control and Data Acquisition (SCADA) network. Cal Water also stated that the company is designated as critical infrastructure as defined by the Department of Homeland Security (DHS) and is covered under the National Infrastructure Protection Plan (NIPP). The company also must comply with other standards such as Sarbanes-Oxley (SOX), Payment Card Industry (PCI), and Health Insurance Portability and Accountability Act (HIPAA).

ORA argued that Cal Water's current security tools (SEIM and QRadar) along with its IT staff are sufficient to deal with outside intrusion threats.

In rebuttal, Cal Water discussed its existing security software platform and pointed out the current gaps and limitations; Cal Water also stressed that the current system is not an intrusion detection or prevention system. Cal Water also noted that it has seen a marked increase in external attempts to hack, phish, or otherwise intrude into Cal Water's network.

RESOLUTION: Parties agree that Cal Water should be authorized to complete this project as proposed. Cal Water further agrees that this IT project will be included in the reporting discussed at the beginning of this chapter.

References: Exhibit CWS-38, pages 186-188; Exhibit ORA-7, pages 42-43; Exhibit CWS-110, pages 197-200.

REBUTTAL TESTIMONY OF RANDELL MILLER

ATTACHMENT 8 – CWSC’S SETTLEMENT ATTACHMENT 4

ATTACHMENT 8

Attachment 4 to Settlement Agreement - Carryover Projects

District	PID	Description	2015 Amount	2016 Amount	2017 Amount
CSS	00065678	Field - 2 Power Quality Analyzer - EMT Equipment	\$0	\$12,712	\$0
CSS	00065681	Field - 2 Infrared Cameras	\$0	\$11,350	\$0
CSS	00069609	Office - Spatial Portal Enhancement	\$0	\$741,717	\$0
CSS	00069952	Office - Station Maps in GIS	\$0	\$0	\$708,900
CSS	00010969	Additional Software Seats	\$17,003	\$0	\$0
CSS	00017328	Office - Additional Printers & Copiers - Various	\$134,540	\$0	\$0
CSS	00017901	Office - Geospatial Data Integration	\$1,485,427	\$0	\$0
CSS	00018119	Office - Operations Data Management	\$0	\$325,000	\$0
CSS	00020702	Field - EMT Tools	\$55,556	\$0	\$0
CSS	00020708	Office - Enterprise Asset Management	\$0	\$1,211,250	\$0
CSS	00021107	Office - SCADA Enhancements	\$198,337	\$0	\$0
CSS	00021130	Office - Emergency Operations Cente	\$434,262	\$2,571	\$0
CSS	00021226	Office - SCADA Replacement Specification	\$0	\$278,389	\$0
CSS	00063312	Office - Enterprise End User Software	\$678,527	\$0	\$0
CSS	00063314	Office - I.T. Security	\$0	\$313,114	\$0
CSS	00063411	Office - Enterprise Identity Mgmt - Phase I	\$0	\$518,554	\$0
CSS	00063472	Office - IT Services Suite - Phase I - Help Desk	\$0	\$456,038	\$0
CSS	00063654	Office - LIMS Upgrade	\$0	\$0	\$424,300
CSS	00063813	Office - Enterprise Work and Asset Management	\$0	\$1,305,103	\$0
CSS	00063819	Office - Enterprise Work and Asset Management	\$0	\$650,000	\$0
CSS	00063934	Office - Pipeline Decision Support System	\$0	\$0	\$696,000
CSS	00064055	Office - I.T. Bill Printer - Data Center	\$0	\$466,517	\$0
CSS	00064057	Office - Enterprise Reporting & Analysis	\$827,338	\$0	\$0
CSS	00064072	Office - Enterprise Reporting & Analysis	\$0	\$1,445,000	\$0
CSS	00064075	Office - Color Copier - I.T. Publishing	\$0	\$39,924	\$0
CSS	00064094	Office - Copier - Engineering	\$0	\$22,541	\$0
CSS	00064096	Office - Copier - Rates Department	\$5,822	\$0	\$0
CSS	00064100	Office - Copier - Human Resources	\$0	\$11,990	\$0
CSS	00064101	Office - Copier - Customer Service	\$0	\$22,523	\$0
CSS	00064114	Office - 4 Copiers - I.T. Building	\$0	\$54,808	\$0
CSS	00064157	Office - Medical Claims Management	\$0	\$1,248,000	\$0
CSS	00064253	Office - AutoCad Design Suite Software - Engineering	\$0	\$8,073	\$0
CSS	00064374	Office - Mobile Workforce Management	\$0	\$142,040	\$0
CSS	00064481	Office - Mobile Workforce	\$612,414	\$0	\$0
CSS	00064504	Office - Enterprise Application Integration 2014	\$479,653	\$0	\$0
CSS	00064611	Office - Customer Care and Billing	\$0	\$5,708,548	\$0
CSS	00065190	Vehicle - 0.5 Ton Pick Up - So Cal Pool	\$36,406	\$0	\$0
CSS	00065192	Vehicle - Sedan - Water Quality Project Manager	\$0	\$36,488	\$0
CSS	00065417	Vehicle - 1 Ton C&C and Service Body - EMT	\$0	\$67,665	\$0
CSS	00065418	Vehicle - Sedan - VP of Rates	\$0	\$48,809	\$0
CSS	00065419	Vehicle - 1 Ton C&C and Service Body - EMT	\$92,432	\$0	\$0

REBUTTAL TESTIMONY OF RANDELL MILLER

ATTACHMENT 9 – EMAIL FROM SGVWC

ATTACHMENT 9

Miller, Randy

From: Shawn M. Cosgrove <smcosgrove@sgvwater.com>
Sent: Tuesday, March 23, 2021 9:26 AM
To: Miller, Randy
Subject: Response to our conversation regarding Cyber Security

EXTERNAL EMAIL
Randy,

Although during the historical period of 2014-2019, San Gabriel Valley Water Company had minimal capitalized expenditures in the General Division for cybersecurity, almost all of San Gabriel's cybersecurity requirements were outsourced during this timeframe, and those cybersecurity costs were expensed. Further, Cybersecurity capital expenditures charged to each operating division in support of San Gabriel's SCADA and production systems were substantially greater.

Thanks
Shawn

Shawn Cosgrove
San Gabriel Valley Water Company
Information Technology Manager
smcosgrove@sgvwater.cm
(626) 448 - 6183

REBUTTAL TESTIMONY OF RANDELL MILLER

**ATTACHMENT 10 – GREAT OAKS RESPONSE TO DATA REQUEST
AMX-001**

ATTACHMENT 10

Great Oaks Water Company							
Requested Items	2014	2015	2016	2017	2018	2019	
Annual Cybersecurity Related Capital Expenditures	1,762	2,696	9,641	22,338	6,887	5,356	
Annual Total IT Capital Expenditures (Excluding Cybersecurity)	27,670	45,940	58,275	25,948	54,001	43,378	
SCADA Capitalized Expenditure (If centralized in GO)	0	2,387	84,021	174,251	45,257	27,415	
SCADA Capitalized Expenditure (If no GO structure and operate under single district)	0	0	0	0	0	0	

Office Furniture & Fixtures							
Billing System Software	22,762	23,826	22,359	28,382	43,635	32,478	
Billing System Hardware	0	10,782	0	1,343	2,480	0	
Server Room Equipment	0	538	0	16,600	2,449	0	
GIS	0	0	0	0	0	2,395	
SCADA	0	2,387	0	0	0	0	
Desktop Computers	856	1,597	2,422	793	0	4,952	
Laptop Computers	5,814	0	0	0	0	1,956	
Printers	0	0	0	1,169	0	0	
Systems & Procedures Documentation	0	0	0	0	0	1,994	
Leak Detection System	0	11,893	3,119	0	0	0	
Hydraulic Water Model Software	0	0	40,016	0	0	0	
Standard Details Manual	0	0	0	0	12,323	0	
Well & Tank Site Security	0	0	0	0	0	4,960	
Office Backup Generator	3,599	0	0	0	0	0	
Emergency Power System	1,794	0	0	0	0	0	
2-Way Radios	858	0	0	0	0	0	
Phone System	0	0	0	22,421	0	0	
Stuffing Machine	0	0	0	28,280	0	0	
Postage Machine	0	0	0	0	8,175	0	
Total	35,683	51,023	67,916	98,988	69,062	48,734	

Communication Equipment							
SCADA Replace/Upgrade	0	0	84,021	174,251	39,671	26,422	
SCWVD Flow Meter Transducer SCADA	0	0	0	0	5,586	993	
Other	0	0	0	0	0	0	
Total	0	0	84,021	174,251	45,257	27,415	

Amount Cybersecurity Related

Modifications are constantly made with cybersecurity in mind, however our software is currently internal only and not hardened as an outward facing system would be.

5%

Having to do with Hardware configuration and equipment premium for cybersecurity considerations allowing, for example, vpn access.

10%

Having to do with Hardware configuration and equipment premium for cybersecurity considerations.

20%

Equipment selection and configuration takes cybersecurity into consideration

10%

Configuration concerning cybersecurity

5%

Configuration concerning cybersecurity

10%

Many procedures are to maintain security

20%

Mostly about local video, but some cybersecurity consideration

5%

Equipment selection and configuration takes cybersecurity into consideration

10%

REBUTTAL TESTIMONY OF RANDELL MILLER

**ATTACHMENT 11 – GSWC DATA REQUEST RESPONSE TO AMX-010
- CONFIDENTIAL**

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

In the matter of the Application of the GOLDEN STATE WATER COMPANY (U 133 W) for an order (1) authorizing it to increase rates for water service by \$49,518,400 or 14.97% in 2022; (2) authorizing it to increase rates by \$16,107,100 or 4.22% in 2023, and increase rates by \$17,207,900 or 4.31% in 2024 in accordance with the Rate Case Plan; and (3) adopting other related rulings and relief necessary to implement the Commission's ratemaking policies

Application 20-07-012

DECLARATION OF CONFIDENTIALITY

I, Gladys Farrow, declare as follows under penalty of perjury:

1. I am an officer of Golden State Water Company ("Golden State"), and as such duly authorized to declare documents and information submitted to the California Public Utilities Commission ("Commission") to be confidential under General Order 66-D.
2. The following person may be contacted regarding the potential release of the confidential information identified by this Declaration:

Name: Gladys Farrow Email: Gladys.Farrow@gswater.com
3. The documents attached hereto, are submitted in part as Response to **Question 1 of Data Request AMX-010 GO IT and Cybersecurity Cap. Exp.** and include confidential information that is protected under California Public Utilities Code Section 583. Specifically, the following documents are marked confidential:
 - "AMX-010 Q1a - Cybersecurity Threats - CONFIDENTIAL.xlsx"
 - "AMX-010 Q1b – Cybersecurity Events – CONFIDENTIAL.pdf"
 - "AMX-010 Q1c – Cybersecurity Capital Projects – CONFIDENTIAL.pdf"
4. All pages that include confidential information in these documents are separately marked as confidential. If only certain information in these documents is confidential, then only that information is marked as confidential.

5. These documents include information protected by the trade secrets privilege pursuant to California Evidence Code Section 1060 as defined in Civil Code Section 3426.1(d), Penal Code Section 499c(a)(9), and Government Code 6254(k). Specifically, the protected information includes: information of economic value and/or commercially sensitive information which may result in potential competitors to use such information to gain an unfair competitive advantage in future transactions.
6. This protected information derives independent economic value, actual or potential, from not being generally known to the public or to other persons who can obtain economic value from its disclosure or use. Golden State does not disclose this information to other parties or agencies without assurance that it will be protected from disclosure, and exercises reasonable efforts to protect its secrecy.
7. I have personally authorized the markings of confidentiality within this/these document/s and if called upon, I could and would testify competently as to their justification and basis.

Sworn to this 7 day of October, at San Dimas, California.



Gladys Farrow
Golden State Water Company
Vice President of Finance, Treasurer & Assistant
Secretary
630 East Foothill Boulevard
San Dimas, California 91773
Telephone: (909) 394-3600
Facsimile: (909) 394-7427
Email: Gladys.Farrow@gswater.com

October 7, 2020



October 7, 2020

Mehboob Aslam, Public Advocates Office
CALIFORNIA PUBLIC UTILITIES COMMISSION
505 Van Ness Avenue
San Francisco, CA 94102

Subject: Data Request AMX-010 (A.20-07-012)
GO IT and Cybersecurity Cap. Exp. Response
Due Date: October 5, 2020; Extension Due Date: October 12, 2020

Dear Mehboob Aslam,

In response to the above referenced data request number, we are pleased to submit the following responses:

Question 1:

Referring to page 32 of the Prepared Testimony of Randell Miller, a table is provided whose contents are described as a “sample snapshot from our security correlation server for the last 30 days as of October 10, 2019 representing the types of attacks we receive on a monthly basis.” Please provide the following information:

- a. Prepare a schedule in MS Excel that links all of your proposed GO projects identified as “Cybersecurity” with the various cybersecurity breaches/problems the projects would address, as listed in the table. If there are more such cybersecurity breaches/problems experienced but are not listed in the table, then include those as well and provide the adequate support that those breaches/problems were actually encountered by GSWC.
- b. Describe in detail how each cybersecurity breach/problem as identified in the item-1(a) was addressed with the help of GSWC’s existing cybersecurity infrastructure and resources.
- c. Describe in detail why the proposed “Cybersecurity” projects are needed when GSWC’s existing cybersecurity resources and infrastructure were successful in identifying and protecting GSWC’s operations and other IT resources from the breaches/problems identified in Item 1(a) above.

- d. Provide annual Cybersecurity capital expenditures in GO over the period of 2014-2019. Provide the information in MS Excel format.
- e. Provide annual IT capital expenditures in GO (including the Cybersecurity capital expenditure identified in item 1(d) above) over the period of 2014-2019. Provide the information in MS Excel format.

Response 1:

- a. To ensure absolute clarity, GSWC has not experienced a breach of our network where information of any sort was stolen to the best of our knowledge. The company has observed and reacted to events. A breach is defined as a cybersecurity incident during which unauthorized parties steal information from company systems.

The table on page 32 of the Prepared Testimony of Randell Miller should not be interpreted as a holistic representation of the entirety of the traffic from that point in time or of the threat events observed by GSWC during that time. For example, the "Malware" line shows 238,098 individual pieces of network communication observed by one device that included a network address that the device vendor categorized as malware, which is itself a very broad category made up of several specific types of threats that all warrant different defensive measures.

Tab 1 of the spreadsheet attached as "AMX-010 Q1a – Cybersecurity Threats - CONFIDENTIAL" is a recent 30-day snapshot (where possible) of known threats related to cybersecurity events GSWC has experienced and relates those threats to the defensive technologies used to defend against them, whether it is that technology's primary function or a derived capability.

- b. **Refer to Confidential attachment "AMX-010 Q1b – Cybersecurity Events - CONFIDENTIAL".**
- c. The Security Effectiveness Report 2020 by FireEye¹, one of the leading cybersecurity companies in the world, showed that in real-world testing an average of 65% of attacks go undetected in corporate environments. Common causes listed for these low numbers include outdated classification categories, limited network monitoring, and poor tracking and communication of changes to systems to allow exceptions to security rules. These low detection numbers are a significant factor in the time an attacker has to sit inside a targeted company's network, stealing information without the company's knowledge.

¹ <https://content.fireeye.com/security-effectiveness/rpt-security-effectiveness-2020-deep-dive-into-cyber-reality> - p. 12

The 2020 Cost of a Data Breach Report published by IBM Security² using research from the Ponemon Institute provided statistics from 524 breached organizations. The report showed that on average it took 207 days to detect that a breach had occurred and another 73 days to fully resolve the situation and restore services for a total breach lifecycle of 280 days at an average cost of 6.03 million dollars. Companies with fully deployed security automation systems took significantly less time to detect (175 days) and resolve (59 days) than those without, and on average saved 3.5 million dollars in overall cost per breach related to breach response.

In an article on ZDNet, author Danny Palmer quoted Symantec's Dick O'Brien saying, "There are lots of steps the attacker has to take to get to where they want to go and do whatever they want to do. Each individual step is an opportunity for it to be detected, disrupted and even blocked. And what you'd hope is that, if they aren't detected during one step in that chain, they will be detected in the next."³ A Defense in Depth strategy significantly increases the chances of being able to detect, alert, and respond to attacks before the attacker has a chance to take all their steps.

The FireEye report states⁴ that on average, organizations have between 30 and 50 tools dedicated to detecting and preventing attacks and data breaches. GSWC currently has 18 cybersecurity tools that support cybersecurity defense, either as their primary function or as a secondary capability. GSWC is requesting five (5) net-new cybersecurity capital products. Using the NIST Cybersecurity Framework as a guide, GSWC has designed a defensive strategy to provide the multiple layers of defense necessary to deter attackers and detect indicators of attack and compromise. Critical pieces of that strategy necessary to provide the detection and alerting and to better train employees to recognize indications of an attack still need to be implemented.

Refer to Confidential attachment "AMX-010 Q1c – Cybersecurity Capital Projects - CONFIDENTIAL".

In the aftermath of most publicized data breaches, top cybersecurity experts give the same advice:

² <https://www.ibm.com/security/digital-assets/cost-data-breach-report/#/> - p. 48-56 Requires registration

³ https://www-zdnet-com.cdn.ampproject.org/v/s/www.zdnet.com/google-amp/article/these-hackers-have-spent-months-hiding-out-in-company-networks-undetected/?usqp=mq331AQFKAGwASA%3D&_js_v=0.1 – at end of article (no page numbers)

⁴ <https://content.fireeye.com/security-effectiveness/rpt-security-effectiveness-2020-deep-dive-into-cyber-reality> - p. 7

- A. Ensure you follow industry best practices like locking accounts after several incorrect login attempts
- B. Collect, monitor, analyze, and generate alerts for anomalous behavior everywhere in your network
- C. Look to documents like the NIST Cybersecurity Framework⁵ or the Center for Internet Security Critical Security Controls⁶ to guide your cyber defense efforts.

Cybersecurity is all about staying ahead of threats rather than managing them later.

- d. The requested MS Excel schedule is attached as attachment "AMX-010 Q1d – GO IT Cybersecurity spend by year 2014-2019".
- e. The requested MS Excel schedule is attached as attachment "AMX-010 Q1e – GO IT spend by year 2014-2019".

If you have any questions, please do not hesitate to call me at (909) 394-3600, Extension 680.

Sincerely yours,

**Jon
Pierotti**

Digitally signed by Jon Pierotti
DN: cn=Jon Pierotti, o=GSWC,
ou=Regulatory Affairs,
email=jon.pierotti@gswater.com,
c=US
Date: 2020.10.07 13:20:13 -07'00'

For Keith Switzer
Vice President – Regulatory Affairs

- c: Eileen Odell, Project Lead
- Victor Chan, Project Coordinator
- Shanna Foley, Attorney for Public Advocates Office
- Joseph Karp, Attorney for GSWC
- Chris Kolosov, Attorney for GSWC
- Jenny Darney-Lane, Manager of Regulatory Affairs
- Jon Pierotti, Manager of Regulatory Affairs

⁵ <https://www.nist.gov/cyberframework>


⁶ <https://www.cisecurity.org/controls/>

AMX-010 Q1a - Cybersecurity Threats - CONFIDENTIAL
CONFIDENTIAL MATERIALS protected under Cal. Gov. Code 6254(k),
Cal. Evid. Code §1060, Civ. Code §3426.1(d), Penal Code §499c(a)(9), and Pub. Util. Code §583.


CONFIDENTIAL

CONFIDENTIAL


AMX-010 Q1b – Cybersecurity Events
CONFIDENTIAL MATERIALS protected under Cal. Gov. Code 6254(k),
Cal. Evid. Code §1060, Civ. Code §3426.1(d), Penal Code §499c(a)(9), and Pub. Util. Code §583.



AMX-010 Q1b – Cybersecurity Events
CONFIDENTIAL MATERIALS protected under Cal. Gov. Code 6254(k),
Cal. Evid. Code §1060, Civ. Code §3426.1(d), Penal Code §499c(a)(9), and Pub. Util. Code §583.



AMX-010 Q1c – Cybersecurity Capital Projects
CONFIDENTIAL MATERIALS protected under Cal. Gov. Code 6254(k),
Cal. Evid. Code §1060, Civ. Code §3426.1(d), Penal Code §499c(a)(9), and Pub. Util. Code §583.



AMX-010 Q1c – Cybersecurity Capital Projects
CONFIDENTIAL MATERIALS protected under Cal. Gov. Code 6254(k),
Cal. Evid. Code §1060, Civ. Code §3426.1(d), Penal Code §499c(a)(9), and Pub. Util. Code §583.

